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ELECTRICITE  
PLOMBERIE  
CHAUFFAGE  
CLIMATISATION



**PROFESSIONNEL DU GAZ**  
INSTALLATION - MAINTENANCE



## DOSSIER DES OUVRAGES EXECUTES

LOT N°04 – PARTIE PLOMBERIE-CVC

REHABILITATION DE LA CAPITAINERIE – PHASE II

PORT DE PLAISANCE – 34250 PALAVAS-LES-FLOTS



### Maître d'ouvrage :

COMMUNE DE PALAVAS-LES-FLOTS  
16, BOULEVARD MARECHAL JOFFRE  
34250 PALAVAS-LES-FLOTS



### Maître d'œuvre :

LAURENT CASCALES, CTP ARCHITECTES  
15, RUE MOLIERE  
34290 SERVIAN

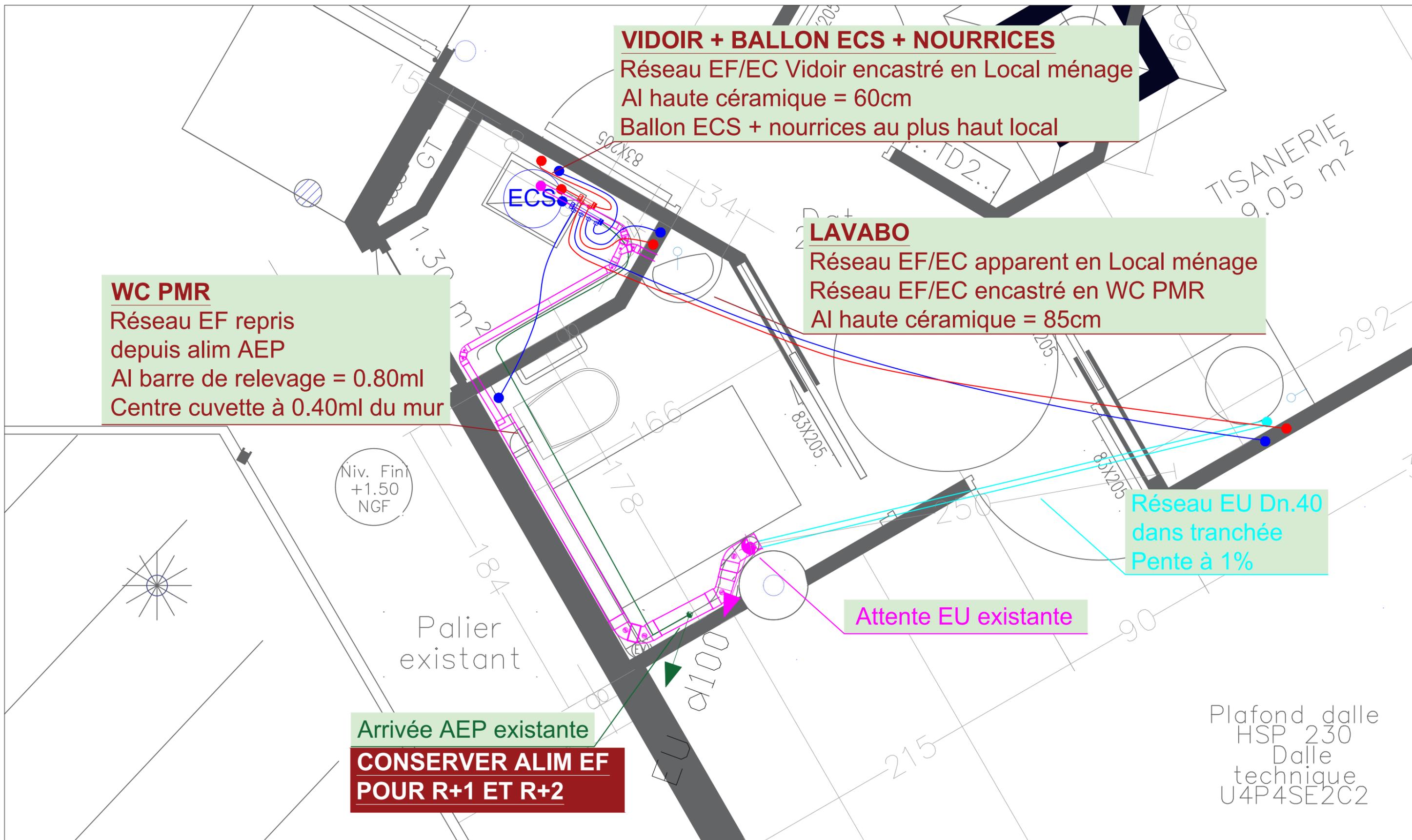
### Bureau de contrôle :

BTP CONSULTANTS  
40, AVENUE THEROIGNE DE MERICOURT  
34000 MONTPELLIER

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# PLANS



**VIDOIR + BALLON ECS + NOURRICES**  
 Réseau EF/EC Vidoir encastré en Local ménage  
 Al haute céramique = 60cm  
 Ballon ECS + nourrices au plus haut local

**LAVABO**  
 Réseau EF/EC apparent en Local ménage  
 Réseau EF/EC encastré en WC PMR  
 Al haute céramique = 85cm

**WC PMR**  
 Réseau EF repris depuis alim AEP  
 Al barre de relevage = 0.80ml  
 Centre cuvette à 0.40ml du mur

Réseau EU Dn.40 dans tranchée  
 Pente à 1%

Attente EU existante

Arrivée AEP existante  
**CONSERVER ALIM EF POUR R+1 ET R+2**

Plafond dalle HSP 230  
 Dalle technique U4P4SE2C2

Projet : Réhabilitation de la capitainerie au Port de Plaisance de Palavas-les-Flots      Titre : Plan Plomberie RDC      Echelle : 1/20 A3

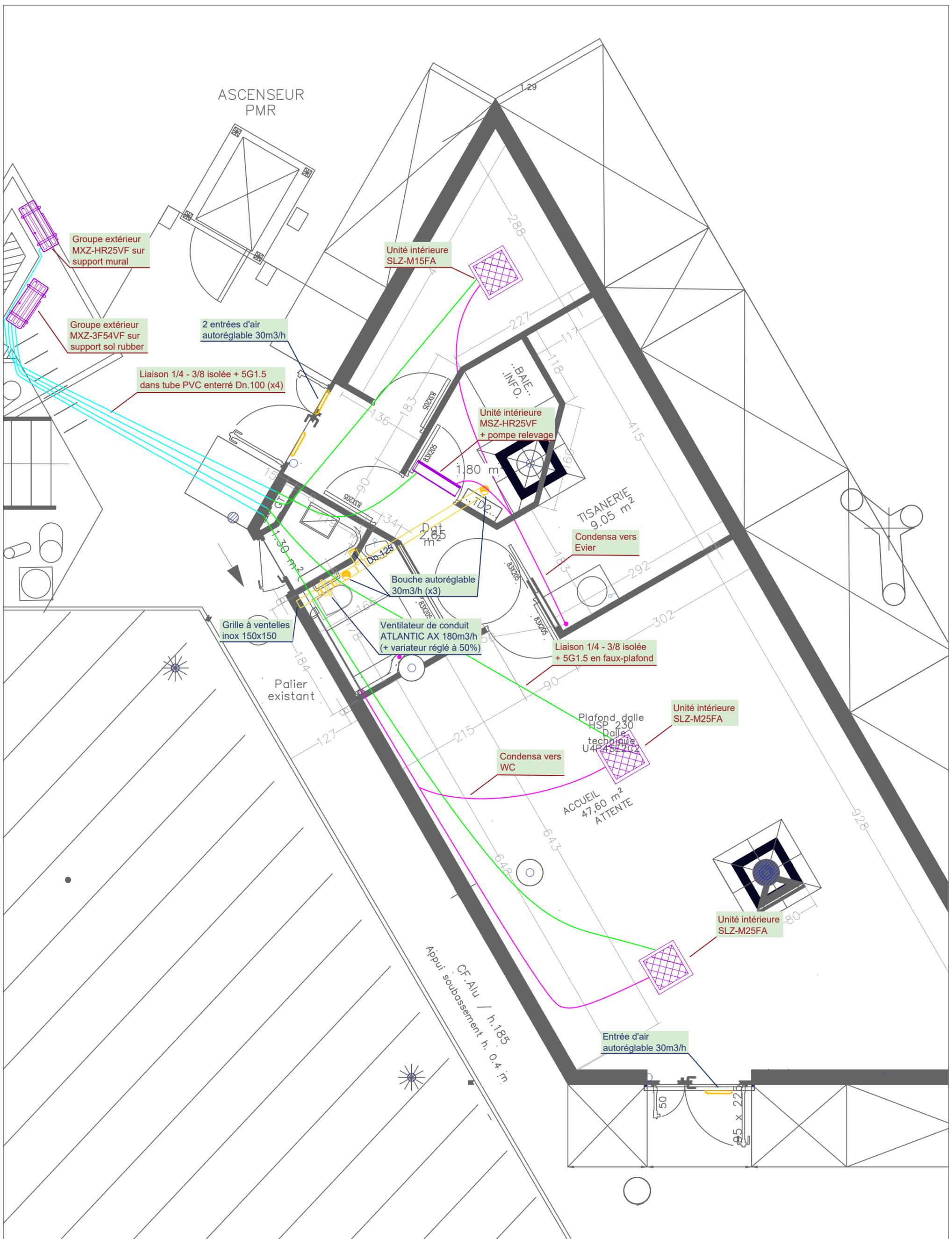
**CAMBORDE ENERGIES 34**  
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Maitrise d'ouvrage :  
 COMMUNE DE PALAVAS-LES-FLOTS  
 16,BOULEVARD MARECHAL JOFFRE  
 34250 PALAVAS-LES-FLOTS

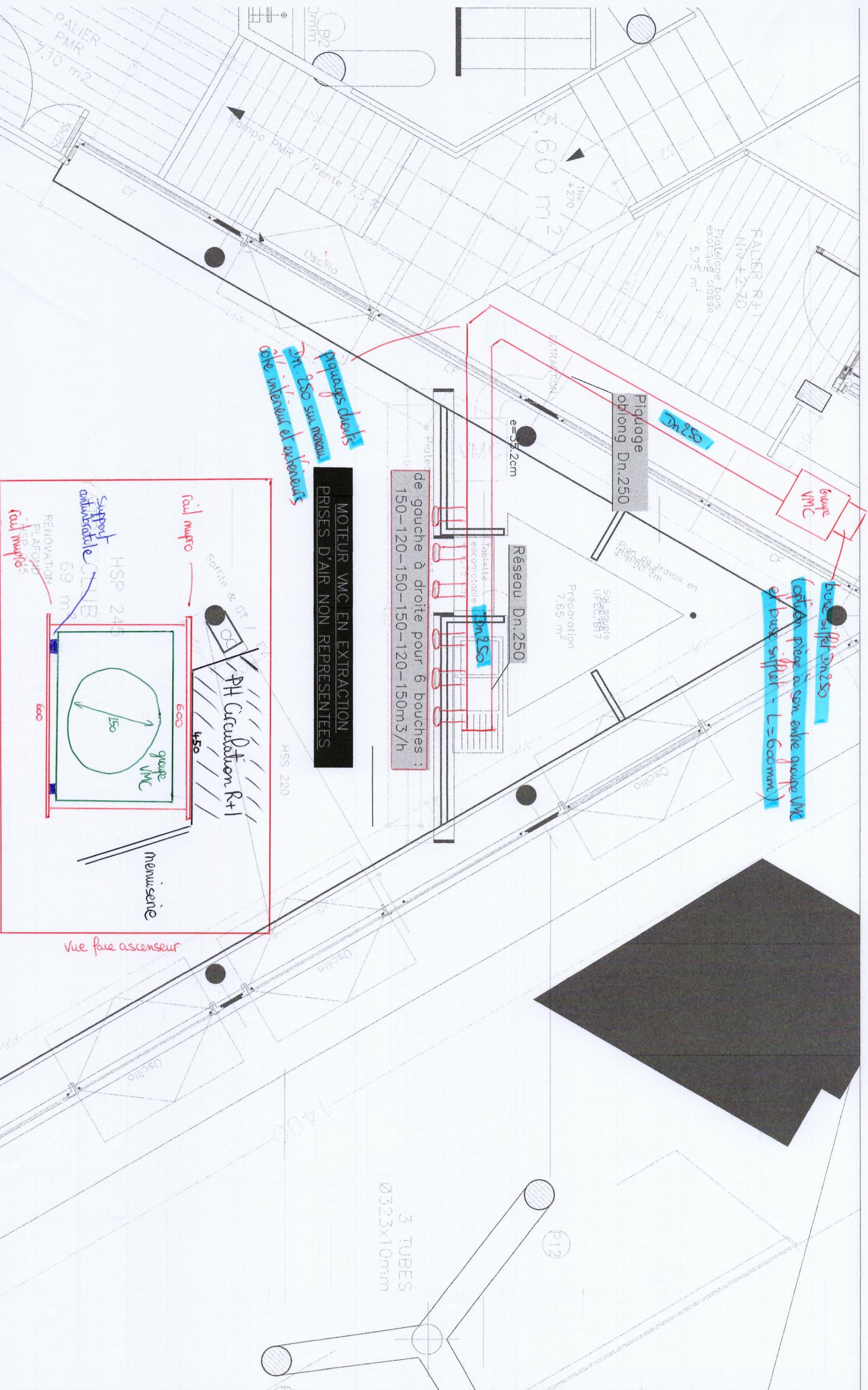
Maitrise d'oeuvre :  
 LAURENT CASCALES, CTP ARCHITECTES  
 15, RUE MOLIERE  
 34290 SERVIAN

Indice :  
 A - Emission initiale  
 B - Selon modifications RC du 15/05/23

Date :  
 15/05/2023



<b>Projet :</b> Réhabilitation de la capitainerie au Port de Plaisance de Palavas-les-Flots		<b>Titre :</b> Plan CVC RDC		<b>Echelle :</b> 1/50 A3	
 <b>CAMBORDE ENERGIES 34</b> Électricité - Plomberie - Climatisation 6 Grand Rue 34725 SAINT GUIRAUD c.energies34@gmail.com	<b>Maitrise d'ouvrage :</b> COMMUNE DE PALAVAS-LES-FLOTS 16, BOULEVARD MARECHAL JOFFRE 34250 PALAVAS-LES-FLOTS	<b>Maitrise d'oeuvre :</b> LAURENT CASCALES, CTP ARCHITECTES 15, RUE MOLIERE 34290 SERVIAN	<b>Indice :</b> A - Emission initiale		<b>Date :</b> 12/07/2023
			B - Selon modification RC du 15/05/23		
			C - Version DOE		



Projet : **Élévation de la capitainerie - Port de Plaisance**

**CAMBORDE ENERGIES 34**  
 Electricité - Plomberie - Climatisation  
 6 Grand Rue  
 34725 SAINT GUIRAUD  
 energies34@gmail.com

**Maitrise d'ouvrage :**  
 COMMUNE DE PALAVAS-LES-FLOTS  
 16, BOULEVARD MARECHAL JOFFRE  
 34250 PALAVAS-LES-FLOTS

**Maitrise d'oeuvre :**  
 LAURENT CASCALES, CIP ARCHITECTES  
 15, RUE MOULIERE  
 34290 SERVIAN

Titre : **Plan général VMC R+1**

Indice :

- A - Emission initiale
- B - Emission pour visa
- C - Réaménagement étage

Echelle : **1/33 A3**

Date : **12/10/2023**

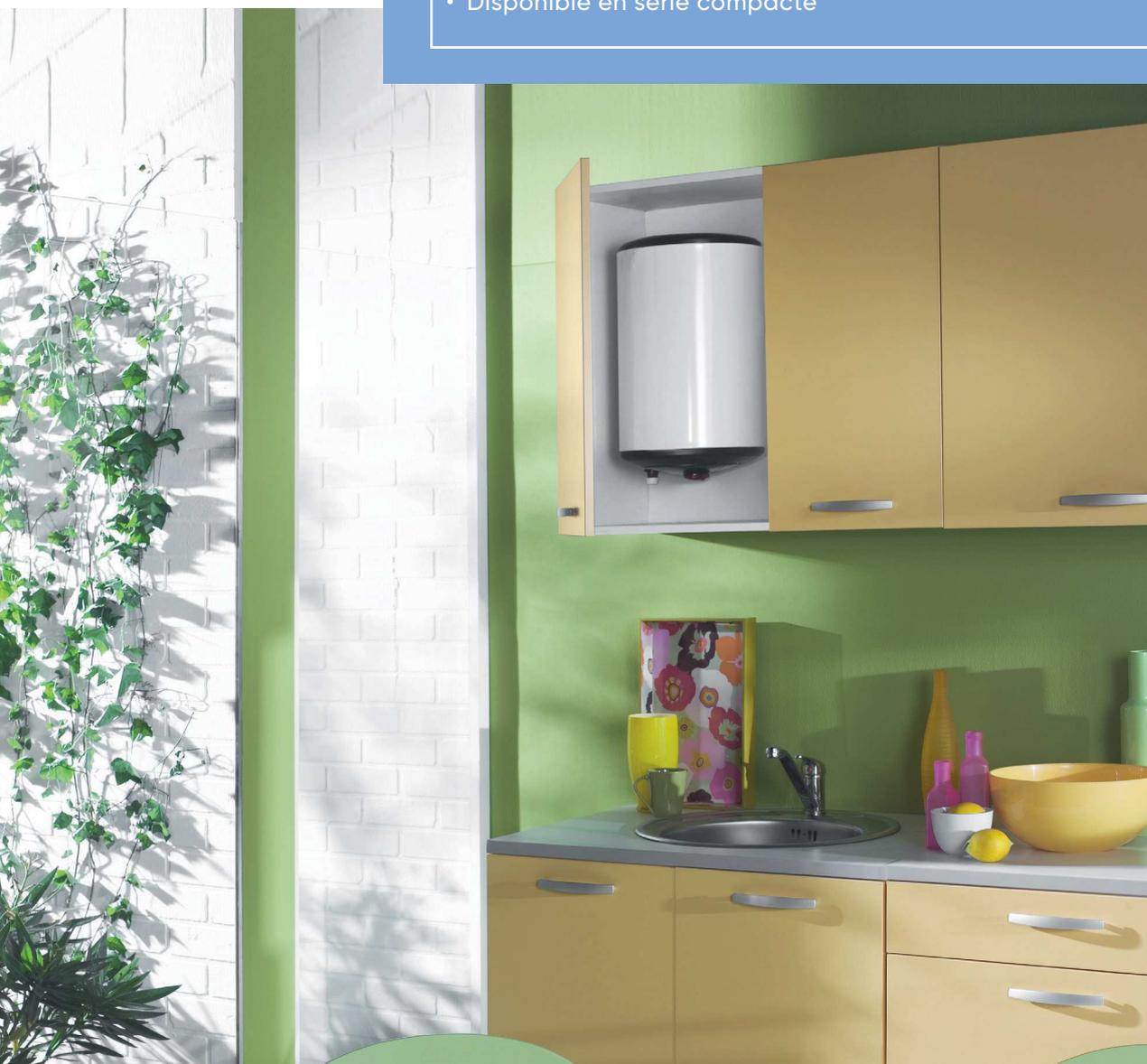
# **FICHES PRODUITS**

# Petites capacités

À PARTIR DE



- Solution d'appoint
- Disponible en série compacte



## LA SOLUTION D'APPOINT

- Eau chaude rapidement disponible
- Protection par anode magnésium  
Nécessite un entretien et un remplacement le cas échéant, tous les 2 ans

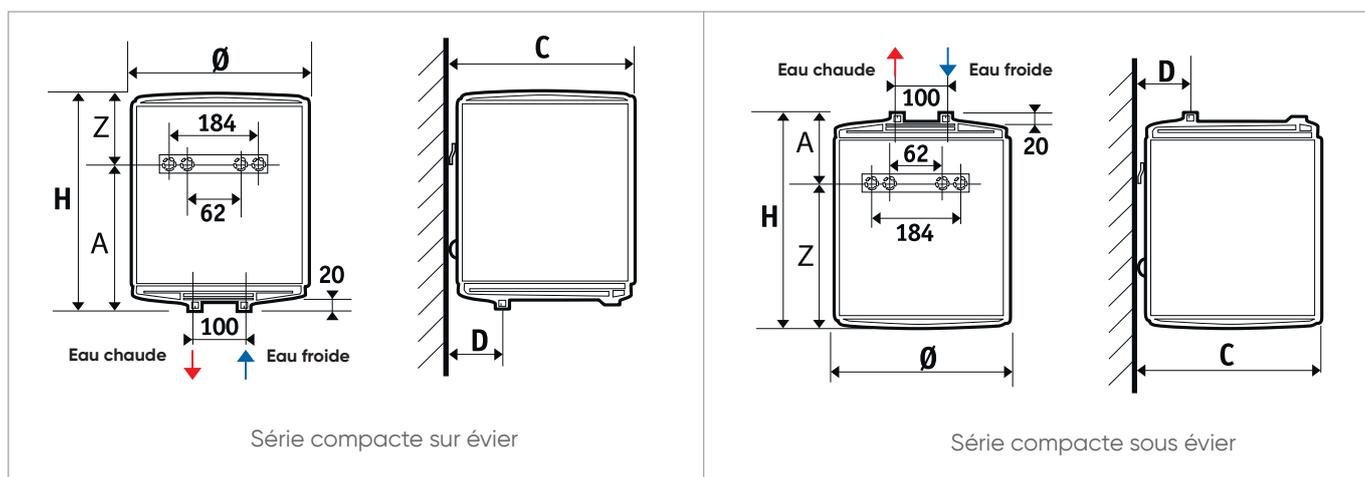
## UN ENCOMBREMENT MINIMAL

- Compacité des modèles en hauteur et en largeur pour une intégration facile sur ou sous un évier (exemple : un placard)



Existe aussi en série compacte, sous et sur évier

## MISE EN ŒUVRE



## CARACTÉRISTIQUES PETITES CAPACITÉS

PETITE CAPACITÉ – PC ÉTROITE SUR ÉVIER – Ø DE RACCORDEMENT HYDRAULIQUE : 1/2" (15/21)														
CAPACITÉ (LITRES)	TENSION (V)	PUISSANCE (W)	TEMPS DE CHAUFFE	CONSTANTE DE REFROIDISSEMENT	CONSOMMATION D'ENTRETIEN kWh / 24 h**	CLASSE ÉNERGÉTIQUE	DIMENSIONS (mm)				POIDS À VIDE (kg)	CODE		
							Ø	H	A	Z	C	D		
15	230 mono	2000	0h29	0,76	0,54	B	287	496	237	169	394	70	9	325116
30		2000	0h52	0,55	0,78	C	338	623	463	160	345	81	13	321104
50		2000	1h36	0,47	1,11	C	338	918	750	168	345	81	18	327106

Sur évier : - IP 25 - Classe I

PETITE CAPACITÉ – PC SÉRIE COMPACTE SUR ET SOUS ÉVIER – Ø DE RACCORDEMENT HYDRAULIQUE : 1/2" (15/21)														
CAPACITÉ (LITRES)	TENSION (V)	PUISSANCE (W)	TEMPS DE CHAUFFE	CONSTANTE DE REFROIDISSEMENT	CONSOMMATION D'ENTRETIEN kWh / 24 h**	CLASSE ÉNERGÉTIQUE	DIMENSIONS (mm)				POIDS À VIDE (kg)	CODE		
							Ø	H	A	Z	C	D		
15 L SUR ÉVIER	230 mono	1600	0h37	0,70	0,50	B	338	400	236	163	345	81	9	325216
15 L SOUS ÉVIER		2000	0h23	0,93	0,66	B	338	399	164	235	345	81	9	326216

\* De 15 à 65°C

\*\* Pour un appareil réglé à 65°C et une ambiance à 20°C

15 L sur évier : sorties eau chaude / eau froide en dessous

15 L sous évier : sorties eau chaude / eau froide sur le dessus

Sous évier : IP 24 - Classe I Sur évier : - IP 25 - Classe I

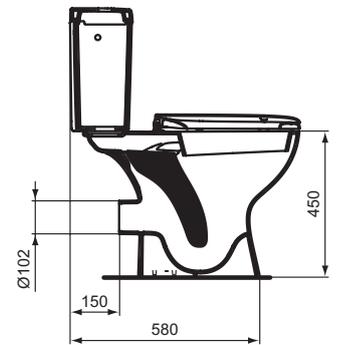
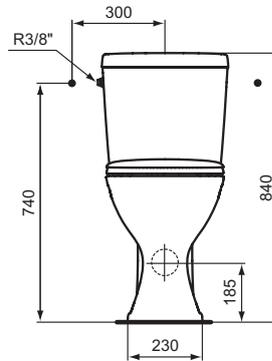


Ideal Standard

WC

Ulysse

PORCHER



Réf. : E905701

## Pack WC surélevé 70 x 38,5 cm NF

Pack WC surélevé 70 x 38,5 cm NF Ulysse en porcelaine vitrifiée blanc. Cuvette sortie horizontale. Hauteur d'assise 45 cm hors abattant, 47 cm avec. Fournie avec kit de fixations au sol. Abattant thermodur (en urea). Fixation par le dessus. Charnières inox. Réservoir 3/6L, alimentation latérale, silencieux, set de fixation cuvette/réservoir

Couleur : 01 - Blanc

Caractéristiques : .Double chasse 3/6L

.Silencieux

.Économie d'eau

Plus de détails sur le produit :

Type :	Pack WC
Montage :	Sur pied
Certifications :	NF
Poids net (kg) :	32,00
Matériau :	Mixte
Hauteur (mm) :	450
Largeur (mm) :	365
Profondeur (mm) :	700
Mécanisme de charnière :	Fermeture standard
Inclus dans le pack :	WC+Réservoir+Abattant
Forme :	Courbe
Type de chasse :	Bouton-poussoir

Ideal Standard France - Showroom Paris

165 av. du Bois de la Pie, 95940 Roissy CDG Cedex, France - Tél : 01 49 38 28 00

E-mail : sav.idealstandard@idealstandard.com (demandes techniques) /

fr-fax-offre-de-prix@idealstandard.com (demandes commerciales) - Site internet : www.idealstandard.fr

## Fiche technique



### Informations

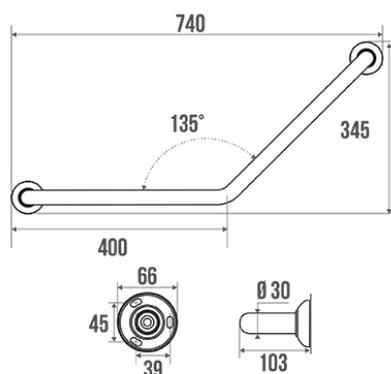
Désignation Barre coudée 135°, 400 x 400 mm, Aluminium Epoxy Blanc  
Référence 049230



### Les + produit

- + Positionnement à droite ou à gauche.
- + Fixations invisibles.
- + Garantie anticorrosion.

### Description



Symétrique.

Tube aluminium blanc Ø 30 mm, platines et cache-fixations blanc en résine de synthèse, Ø 66 mm.

Possibilité de fixer sur cette barre le dérouleur papier WC Réf. 048820.  
Le design de ce produit est coordonné aux accessoires de la Série TRIOLO.  
Visserie fournie (vis 4x30 mm).

### Caractéristiques techniques

Matière	Aluminium
Finition	Epoxy
Couleur	Blanc
Dimensions	400 x 400 mm
Diamètre Ø	30 mm
Poids brut	0.620 kg
Poids net	0.760 kg
Conditionnement	Sachet plastique + Cavalier pour mise en place sur broche
CE - charge admissible	150 kg
Tests laboratoire à	225 kg
Garantie	10 ans

Gencod	3563390492307
Code douanier	761520000
Notice	<a href="#">A49130137_IND_07</a>

## Conseils de pose et entretien

---

Hauteur de pose conseillée : 80 cm du sol. Les barres d'appui ajoutent de la sécurité à l'utilisateur si elles sont installées conformément aux instructions. Les efforts supportés par la fixation murale nécessitent une parfaite sélection de la visserie et des chevilles en fonction de la nature du support mural. Nous vous conseillons de choisir des vis en inox pour éviter tout risque de corrosion en milieu humide ( $\varnothing$  4 mm). Avant de percer la cloison, présenter physiquement le produit contre le mur puis marquer les emplacements de perçage. Tous les points de fixation doivent être impérativement respectés. Après montage et avant utilisation, s'assurer que les vis de fixation sont bien serrées. Ne pas utiliser la barre d'appui comme une marche pour atteindre quelque chose, ne pas s'asseoir dessus ou se suspendre.

## Entretien

**IMPORTANT** : Pour garantir la pérennité de ce produit et la sécurité de l'utilisateur, nous recommandons, pour le nettoyage, l'utilisation de savon doux. **ATTENTION, NE PAS UTILISER** des produits de nettoyage à base de cétone, hydrocarbures, acides, bases, esters et éthers. Après utilisation d'un produit de nettoyage, effectuez un rinçage à l'eau claire.

## Confort d'usage

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### Fonction

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Maintien	★★★★
Relevage	★★★★

### Caractéristiques

---

Horizontal	★★★★
Oblique	★★★★
Anticorrosion	★★★★

### Type d'utilisation

---

Bain	★★★★
Douche	★★★★
WC	★★★★
Vestiaire/Cabine	★★★★

### Lieux d'utilisation

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Ets médicaux	★★★★
ERP/IOP	★★★★
Hôtels	★★☆☆
Habitats privés	★★★★
Lieux de travail	★★★★

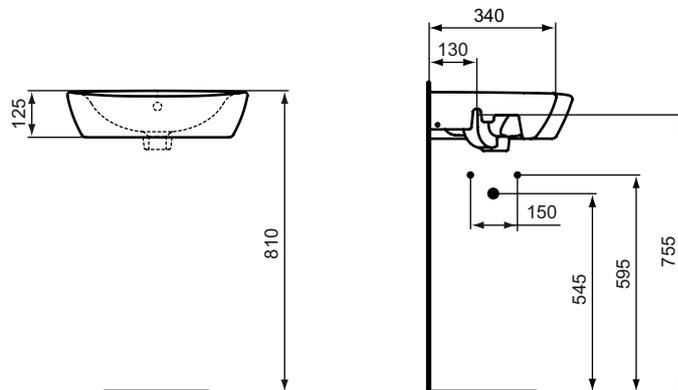


Ideal Standard

## Lavabo/vasque/lave-mains

# Ulysse

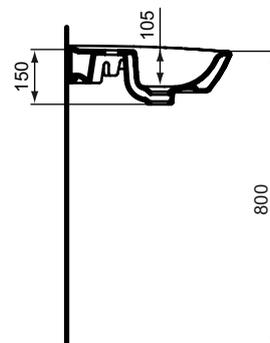
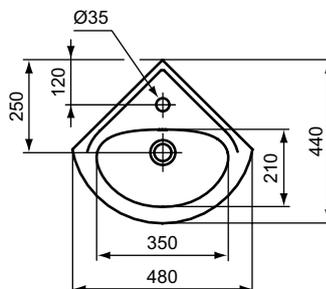
PORCHER



Réf. : E899701

### Lave-mains d'angle 34 x 34 x 44 cm NF

Lave-mains d'angle 34 x 34 x 44 cm NF Ulysse en porcelaine vitrifiée blanc, percé d'1 trou central pour la robinetterie. Fixation murale par 2 tire-fonds non fournis



Couleur : 01 - Blanc

Caractéristiques :

#### Plus de détails sur le produit :

Type :	Lave-mains
Montage :	Mural
Certifications :	NF
Trous de robinetterie :	1
Poids net (kg) :	8,20
Matériau :	Porcelaine vitrifiée
Hauteur (mm) :	150
Largeur (mm) :	480
Profondeur (mm) :	440
Forme :	Arc

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[fr-fax-offre-de-prix@idealstandard.com](mailto:fr-fax-offre-de-prix@idealstandard.com) (demandes commerciales) - Site internet : [www.idealstandard.fr](http://www.idealstandard.fr)



Ideal Standard

Robinetterie

Olyos

PORCHER



Réf. : D1112AA

## Mitigeur de lavabo monotrou

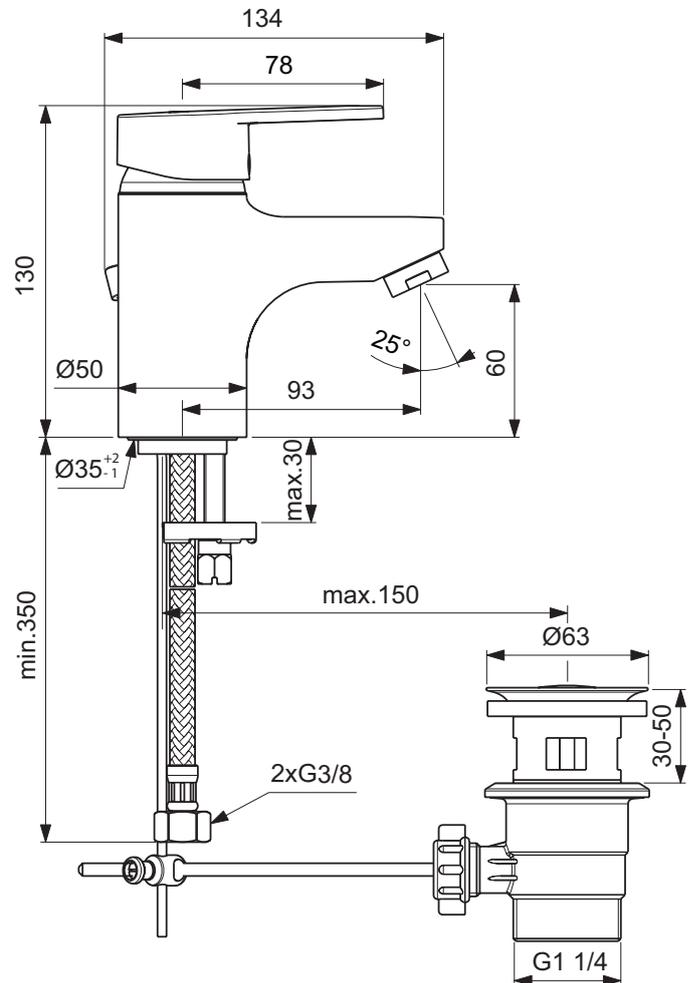
Mitigeur lavabo monotrou Olyos chrome. Bec fixe avec aérateur intégré. Tirette côté droit. Cartouche Ø 40 mm à 2 disques céramique, réf. B960775NU. avec limiteur de température intégré et limiteur de débit 50 % déverrouillable, réf. B960477NU. Flexibles d'alimentation anti-torsion 350 mm

Couleur : AA - Chrome

Caractéristiques : .

### Plus de détails sur le produit :

Type :	Robinetterie de lavabo
Montage :	Sur gorge
Mode de fonctionnement :	Mitigeur
Certifications :	NF
Numéro de certificat :	E0 C2 A1 U3
Débit (litre) :	11,8
Poids net (kg) :	1,28
Matériau :	Laiton chromé
Hauteur (mm) :	130
Largeur (mm) :	70
Profondeur (mm) :	134
Forme :	Courbe



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**E1899**



**Collection :** NORMA

**Couleur\* :**



00 - Blanc brillant

**Principaux atouts :**



### Caractéristiques techniques

- DIMENSIONS : 45 x 35 cm
- MATÉRIAU : Céramique
- FIXATIONS : Attaches fonte (E4598)
- Percé pour grille porte-seau (réf. E5597 non livrée)
- POIDS : 14,2 kg
- TYPE D'INSTALLATION : Autoportant
- NOMBRE DE VASQUES : 1 cuve

Descriptif CCTP : Bac à laver 45 cm. E1899. Collection : NORMA. DIMENSIONS : 45 x 35 cm. POIDS : 14,2 kg. MATÉRIAU : Céramique. TYPE D'INSTALLATION : Autoportant. FIXATIONS : Attaches fonte (E4598). NOMBRE DE VASQUES : 1 cuve. Percé pour grille porte-seau (réf. E5597 non livrée).

**E78114**



**Collection :** BRIVE

**Couleur\* :**



CP - Chrome

**Principaux atouts :**



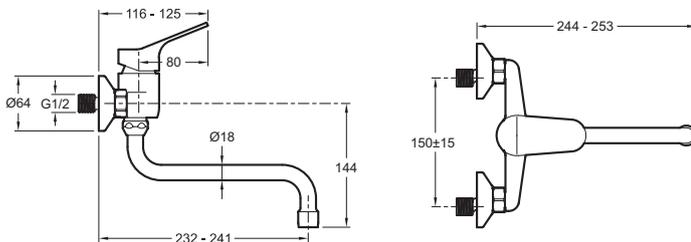
**Caractéristiques techniques**

- POIDS : 1,1 kg
- TYPE D'INSTALLATION : Mural
- TYPE : Mitigeur
- SAILLIE DU BEC (MM) : 240
- MÉCANISME : Cartouche à disques céramique
- ECO CONSO : Economie d'eau
- TYPE DE ROBINETTERIE DE CUISINE : Mécanique
- TYPE D'INSTALLATION : 2 trous
- GARANTIE FINITION : 10 ans
- MATÉRIAU : N/A
- NORMES ET RÉGLEMENTATIONS : NF : E0 C3 A1 U3 // ACS : 15 ACC LY 472
- DÉBIT (L/MN SOUS 3 BARS) : 10,8l/mn
- RACCORDS : Avec raccords et rosaces murales
- ENTRAXE (MM) : 150 ± 15
- VIDAGE : Sans vidage
- TYPE DE BEC : Pivotant
- GARANTIE MÉCANISME : 5 ans
- NOUVEAUTÉ : 0

**Bénéfices consommateurs**

- ÉCONOMIE D'EAU : Butée franchissable économie d'eau
- ÉCONOMIE D'ÉNERGIE : Pas d'eau chaude distribuée en position levier centré
- PERFORMANCE : certification NF, gage de qualité et de respect de l'environnement.
- FACILE D'UTILISATION : poignée horizontale plus pratique au quotidien.

**Dessin technique**



Descriptif CCTP : Mitigeur évier mural. E78114. Collection : BRIVE. POIDS : 1,1 kg. MATÉRIAU : N/A. TYPE D'INSTALLATION : Mural. NORMES ET RÉGLEMENTATIONS : NF : E0 C3 A1 U3 // ACS : 15 ACC LY 472. TYPE : Mitigeur. DÉBIT (L/MN SOUS 3 BARS) : 10,8l/mn. SAILLIE DU BEC (MM) : 240. RACCORDS : Avec raccords et rosaces murales. MÉCANISME : Cartouche à disques céramique. ENTRAXE (MM) : 150 ± 15. ECO CONSO : Economie d'eau. VIDAGE : Sans vidage. TYPE DE ROBINETTERIE DE CUISINE : Mécanique. TYPE DE BEC : Pivotant. TYPE D'INSTALLATION : 2 trous. GARANTIE MÉCANISME : 5 ans. GARANTIE FINITION : 10 ans. NOUVEAUTÉ : 0.

\*En raison des variations possibles dans le réglage de votre ordinateur et de votre imprimante, de facteurs techniques et des caractéristiques particulières de certaines de nos finitions, les couleurs ne sont pas représentatives de la réalité mais sont seulement une indication.

# AX BC

## Ventilateurs de conduits basse consommation

FICHE PRODUIT



Débits jusqu'à  
1 600 m<sup>3</sup>/h



# AX BC

## Ventilateurs de conduits basse consommation



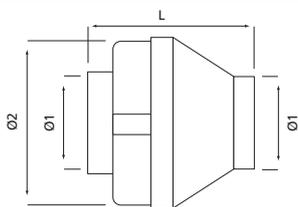
## + PRODUITS

- **Mise en œuvre facilitée :**
  - facilité de raccordement au réseau aéraulique
  - très faible encombrement
  - branchement électrique simplifié (bornier externe)
- **Moteur basse consommation**

### APPLICATION - INSTALLATION

- Ventilateur centrifuge de conduits permettant de véhiculer l'air sur un même axe (aspiration et refoulement alignés).
- Utilisation en insufflation ou extraction.
- Produit pouvant être installé en tout point du réseau aéraulique.
- Installation intérieure.

### DIMENSIONS



LIBELLÉ	L	Ø		Poids (kg)
		Ø1	Ø2	
AX 100 BC	200	98	282	3
AX 125 BC	200	123	282	3
AX 160 BC	200	159,5	323	3
AX 200 BC	240	199	378	5
AX 250 BC	210	250	378	5
AX 315 BC	300	313	447	7

### CARACTÉRISTIQUES

Température et humidité maxi de l'air en fonctionnement : 65°C et 95% HR.

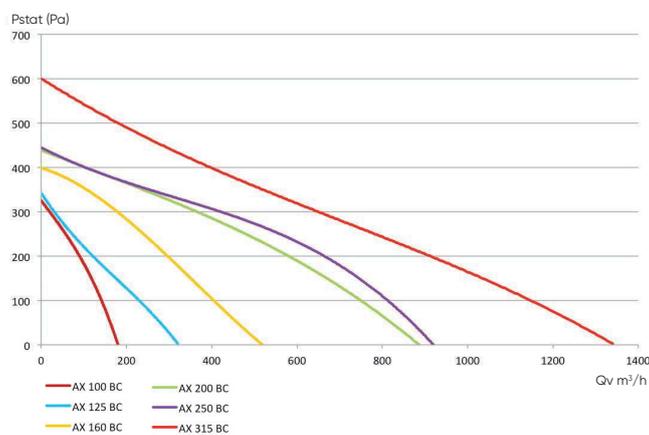
LIBELLÉ	P. Abs (W)	I. maxi (A)	Niv. Son (dB (A))	Vitesse (tr/mn)	Débit maxi (m <sup>3</sup> /h)
AX 100 BC	58	0,26	50	2 580	180
AX 125 BC	52	0,23	48	2 640	315
AX 160 BC	113	0,5	56	2 650	500
AX 200 BC	105	0,45	53	2 700	880
AX 250 BC	105	0,45	50	2 700	920
AX 315 BC	123	0,64	52	2 580	1 340

dB (A) : niveaux de pression acoustique mesurés à 4 m du ventilateur, raccordé et en champ libre.

### CONSTRUCTION

- Acier galvanisé.
- Moteur à rotor extérieur IP44 avec turbine à réaction haut rendement.
- Alimentation monophasé 230 V-50 Hz avec boîtier de raccordement électrique externe.

### COURBES CARACTÉRISTIQUES



### RÉFÉRENCES

LIBELLÉ	RÉF.
AX 100 BC	524748
AX 125 BC	524749
AX 160 BC	524750
AX 200 BC	524751
AX 250 BC	524752
AX 315 BC	524753

## ACCESSOIRES

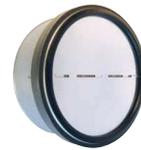
### Jeu de 2 manchettes de suspension



LIBELLÉ	RÉF.
MS 100	523102
MS 125	523115
MS 160	523116
MS 200	523117
MS 250	523118
MS 315	523119

### Volets anti-retour

Fonctionnement sous 10 Pa minimum



LIBELLÉ	RÉF.
VF 100	523104
VF 125	523106
VF 160	523108
VF 200	523110
VF 250	523112
VF 315	523114

### Supports latéraux



LIBELLÉ	Type	RÉF.
SUP 1 AX	100 à 160	523121
SUP 2 AX	200 à 250	523122
SUP 3 AX	315	523123

### Variateur électronique

Vitesse réglable de 0 à 100%



LIBELLÉ	RÉF.
VEM 1.5	311006

### Autotransformateur



LIBELLÉ	RÉF.
VAM 1.0	311010

### Interrupteur de proximité

Cadenassable, IP65



LIBELLÉ	RÉF.
IP 1V-20	522910



## VCM Easy

Ventilateurs de conduits – Voir catalogue Atlantic Climatisation et Ventilation p. 96

## BOUCHES D'EXTRACTION AUTORÉGLABLES

# BE / BN AUTO



GAMME HABITAT  
Certificat n°ATITA : BA 001



Destinée à équiper les installations de VMC en logements d'habitation et locaux tertiaires, la gamme de bouches d'extraction autoréglables **BE/BN** satisfait aux exigences réglementaires tout en alliant esthétique et technicité.

Design fluide, grille déclinable en plusieurs couleurs, fiabilité des organes mécaniques, fonctionnalité éprouvée, performances aérauliques et acoustiques sont les atouts majeurs de l'ensemble des bouches d'extraction **BE/BN**.

La gamme **BE/BN** habitat répond aux exigences de la marque NF VMC.

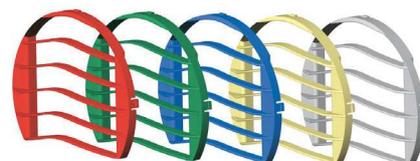
Mono ou double débit, les deux modèles parfaitement cohérents permettent ainsi un traitement architectural homogène entre cuisine, salle de bains et WC.

Réalisée en polystyrène blanc, la bouche BE est disponible en deux versions :

- l'une installée en WC et salle de bains, assure un débit d'extraction déterminé,
- l'autre en cuisine ou dans toute pièce nécessitant une modulation des débits, assure un débit permanent d'extraction et un débit complémentaire dont l'ouverture et la fermeture sont commandées par l'utilisateur à l'aide d'un cordon.

Avantages de la bouche **BE** :

- **Contrôle** optimum des débits.
- **Performances** : - NF VMC (caractéristiques aérauliques certifiées)  
- Conforme aux exigences réglementaires (arrêté 82, NRA...).
- **Entretien facilité** par la dépose aisée du module de régulation.
- **Facilité de mise en oeuvre** de l'ensemble bouche + accessoires.
- Grille amovible déclinable en plusieurs couleurs : nous consulter pour plus d'informations.



- Pour la bouche cuisine, visualisation de l'ouverture correspondant au débit maxi d'extraction.

Atlantic Climatisation et Ventilation

13, boulevard Monge Z.I. - BP 71 - 69882 MEYZIEU Cedex - Tél. : 04 72 45 11 00 - Fax : 04 72 45 11 11

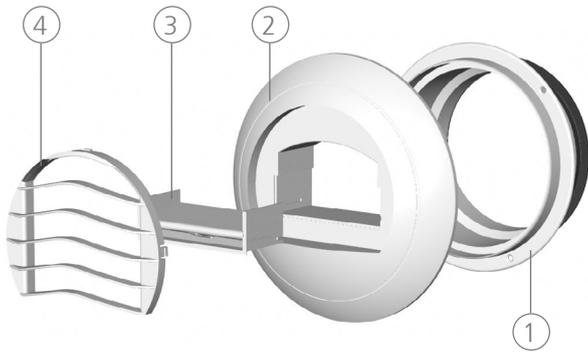
[www.atlantic-pro.fr](http://www.atlantic-pro.fr)

## F O N C T I O N N E M E N T

L'élément régulateur constitué d'un volet rigide assure un débit d'extraction déterminé dans une plage de pression comprise entre 50 et 160 Pascals.

## C O M P O S I T I O N

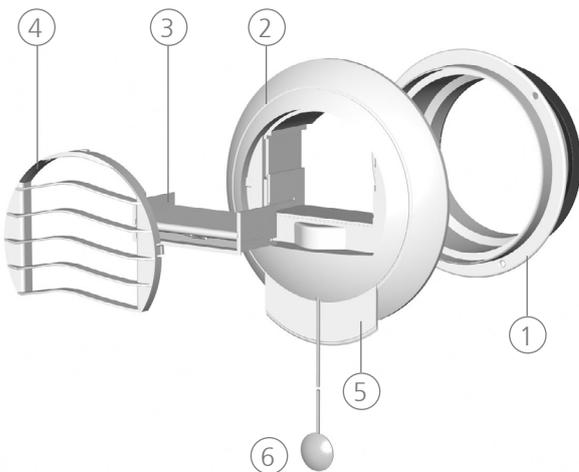
Les bouches **AUTO** ont un diamètre de 170 mm et une épaisseur de 40 mm.



### ► BOUCHE SANITAIRES :

La bouche **BE / BN** simple débit est disponible dans les débits suivants : 15, 30, 45, 60, 75, 90, 120 et 150 m<sup>3</sup>/h.

- ① Manchette Ø 125 sans joint (sur BE uniquement)
- ② Corps de la bouche
- ③ Module de régulation
- ④ Grille amovible



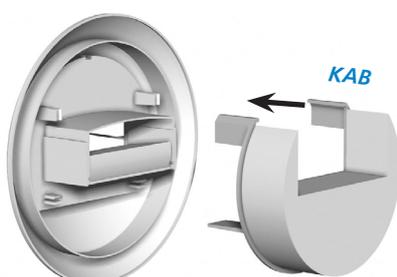
### ► BOUCHE SANITAIRES :

La bouche **BE / BN** double débit est disponible dans les débits suivants : 15/30, 20/75, 30/90, 45/105, 45/120 et 45/135 m<sup>3</sup>/h.

- ① Manchette Ø 125 sans joint (sur BE uniquement)
- ② Corps de la bouche
- ③ Module de régulation
- ④ Grille amovible
- ⑤ Témoin d'ouverture du débit complémentaire
- ⑥ Cordon de manoeuvre du débit complémentaire

La vue ci-contre représente la bouche au débit maximum d'extraction.

## M O D U L E D ' I S O L E M E N T A C O U S T I Q U E K A B



### Module d'isolation acoustique **KAB** :

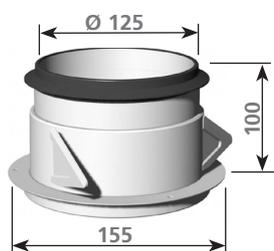
Composé d'un support polystyrène et d'une mousse de mélamine, le **KAB** permet d'améliorer l'isolation acoustique  $D_{n,e,w}$  des bouches **BE / BN** et donc de répondre à l'ensemble des exigences acoustiques. Il ne modifie pas les caractéristiques aérauliques.

**Mise en oeuvre** : le **KAB** se monte par emboîtement en partie arrière de la bouche **BN** cuisine et sanitaire.

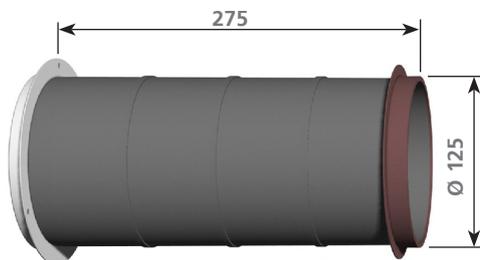
## MISE EN OEUVRE

La bouche **BE** se monte en paroi verticale par emboîtement sur une manchette Ø 125 (livrée séparément) fixée sur le conduit. La fixation et l'étanchéité de la manchette sont assurées par le joint à lèvres. Possibilité de montage sur manchettes Ø 99, 116, 150 ou 160 mm.

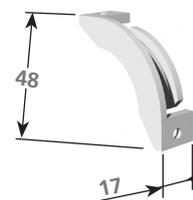
En plafond, la mise en oeuvre est réalisée en utilisant un manchon placo 3 griffes Ø 125 ou un manchon plastique de traversée de dalle Ø 125 réalisés en polystyrène. Possibilité d'utiliser un manchon placo Ø 100 ou Ø 125/80 et un manchon de traversée de dalle Ø 125/80. Le montage en plafond nécessite d'utiliser une pièce de renvoi d'angle permettant le guidage du cordon pour la bouche cuisine (bouche **BE** avec cordon allongé de 20 cm).



Manchon placo 3 griffes



Manchon de traversée de dalle



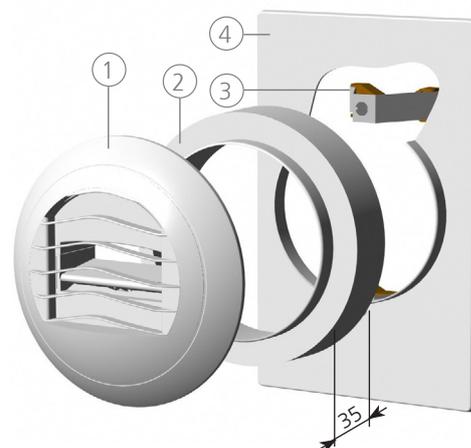
Pièce de renvoi d'angle : RAB

## PLATINE « SPÉCIALE RÉNOVATION »

En prenant certaines précautions (section et étanchéité des conduits), il est possible d'utiliser les conduits de ventilation naturelle existants pour la VMC.

Réalisée en polystyrène blanc, la platine rénovation permet le montage d'une bouche **BE / BN** sur un cadre rectangulaire existant de dimensions 80 x 170 mm à 110 x 245 mm. Pour des cadres de dimensions supérieures à 110 mm de large, il est nécessaire de prévoir des étriers de fixation plus grands (à préciser à la commande).

**Mise en oeuvre :** la platine s'installe une fois les travaux de peinture terminés. Plaquer la platine contre le mur en faisant pénétrer les griffes de fixation à l'intérieur de la réservation. Bloquer les vis avec modération.



- ① Bouche BN
- ② Entretoise
- ③ Etriers de fixation
- ④ Platine rénovation avec joint mousse



- ① Grille
- ② Module de régulation
- ③ Etriers de fixation
- ④ Platine rénovation avec joint mousse

### Platine rénovation 180 x 278 mm pour BN avec entretoise :

Pour des cadres de dimensions supérieures à 90 mm de large, l'entretoise peut être supprimée.

### BR rénovation 15 et 30 m³/h :

Le module de régulation est intégré dans la platine, placé en position verticale.

### Platine rénovation 250 x 250 à visser :

Pour un montage sur des réservations de dimensions 100 x 100 à 200 x 200 mm, fixation par 4 vis (entraxe de fixation 220 mm).

### Platine d'adaptation sur manchette cadre bouche GB/R :

Permet le montage d'une bouche **BE** sur une manchette cadre bouche GB/R existante.

## PLATINE PLEINE RÉNOVATION

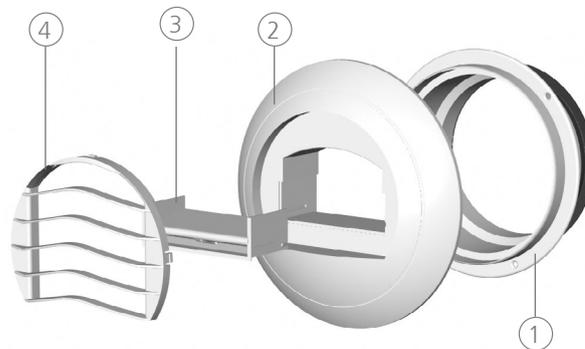
Réalisée en polystyrène blanc, cette platine est destinée à obturer les orifices existants dont l'utilisation n'est plus nécessaire à la ventilation. Mise en oeuvre identique à la platine rénovation.

Dimensions disponibles : 130 x 250 mm pour réservation 80 x 175 à 95 x 210 mm  
 155 x 250 mm pour réservation 80 x 135 à 110 x 210 mm  
 180 x 278 mm pour réservation 80 x 170 à 110 x 245 mm  
 250 x 250 à visser pour réservation 100 x 100 à 200 x 200 mm

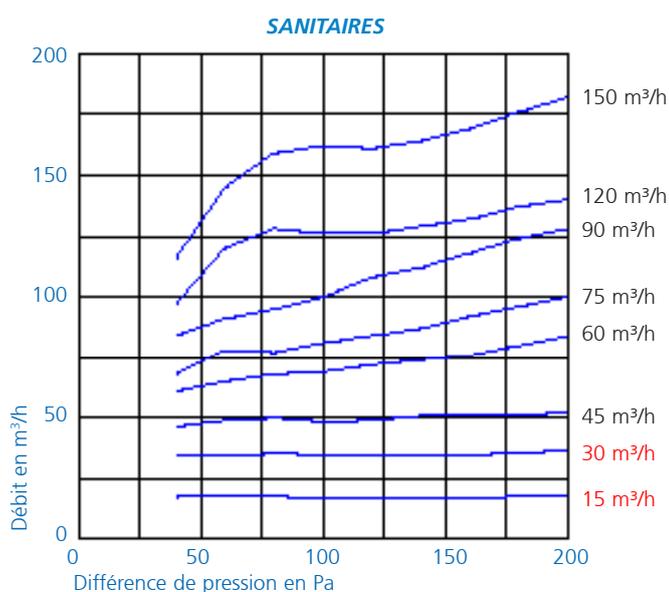
## ENTRETIEN

Afin de conserver le maximum d'efficacité, il est nécessaire de procéder à un nettoyage périodique :

- Oter la grille (4) et le module de régulation (3) du corps de la bouche (la bouche retirée de la manchette si nécessaire).
- **La manchette (1) ne doit pas être déposée du conduit.**
- Nettoyer l'ensemble soit dans la partie haute d'un lave-vaisselle, soit manuellement à l'eau savonneuse, sans rien démonter du module de régulation.
- Remonter la bouche.



## CARACTÉRISTIQUES AÉRAULIQUES (Rapports d'essais CSTB 41391 et 42562)



La marque NF VMC certifie les caractéristiques aérauliques. Elle permet la valorisation, dans le cadre de la RT 2005, des bouches d'extraction autoréglables BE habitat, par la prise en compte, dans les calculs thermiques, d'un coefficient de dépassement Cd égal à **1,10**

## CARACTÉRISTIQUES ACOUSTIQUES (Rapports d'essais CSTB 41391 et 42562)

Les bouches sont caractérisées par leur isolement acoustique normalisé  $D_{n,e,w}$  (C) et leur niveau de puissance acoustique  $L_w$  mesurés conformément aux normes NF E 51 701 (et pr EN 13141-2).

Le niveau de pression acoustique dû au bruit propre des bouches est donné par la formule :

$$L_p = L_w - 10 \log (V/12,5) \text{ en dB(A) où } V \text{ est le volume en m}^3 \text{ de la pièce}$$

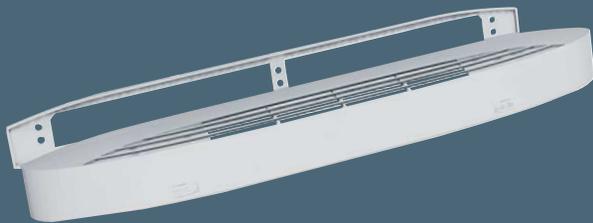
Exemple : pour une pièce de 40 m<sup>3</sup>, et un niveau de puissance acoustique  $L_w = 31$  dB(A) (au niveau permanent d'extraction), le niveau de pression acoustique obtenu est  $L_p = 26$  dB(A).

Sanitaires	Lw en dB(A)				BE / BN AUTO Dn,e,w (C)	BE / BN AUTO + KAB Dn,e,w (C)
	70 Pa	100 Pa	136 Pa	160 Pa		
15 m <sup>3</sup> /h	23	27	32	35	61 dB	64 dB
30 m <sup>3</sup> /h	25	30	35	38	56 dB	60 dB
45 m <sup>3</sup> /h	27	33	34	37	55 dB	62 dB

Cuisine	Lw en dB(A)				BE / BN AUTO Dn,e,w (C)	BE / BN AUTO + KAB Dn,e,w (C)
	70 Pa	100 Pa	136 Pa	160 Pa		
15/30 m <sup>3</sup> /h	27	30	33	36	60 dB	64 dB
25/70 m <sup>3</sup> /h	23	27	32	35	55 dB	59 dB
30/90 m <sup>3</sup> /h	25	30	35	38	53 dB	57 dB
45/105 m <sup>3</sup> /h	32	34	37	39	53 dB	57 dB
45/120 m <sup>3</sup> /h	32	34	37	39	53 dB	57 dB
45/135 m <sup>3</sup> /h	32	34	37	39	53 dB	57 dB

# EAA

## Entrée d'air autoréglable acoustique – Pose menuiserie



### APPLICATIONS

Les entrées d'air autoréglables acoustiques EAA 22, 30 ou 45 m<sup>3</sup>/h se mettent en oeuvre dans les systèmes de VMC autoréglables, hygroréglables de type A ou hygro gaz (Avis technique n° 14.5/17-2279 et n° 14.5/17-2273).

La gamme EAA permet de répondre aux exigences de la nouvelle réglementation acoustique NRA imposant un classement de façade  $D_{nT,Atr}$  de 30 dB ou de 35 dB.

L'entrée d'air EAA 45 assure un isolement de façade classe ESA 4 (exemples de solutions du CSTB).

Les entrées d'air EAA 22 et EAA 30 ainsi que l'entrée d'air EAA 45 + RA (avec rallonge acoustique) assurent un isolement classe ESA 5 (exemples de solutions du CSTB).

Classe ESA 4 :  $D_{n,e,w} + C_{tr} \geq 36$  dB,  
 exigé si surface en m<sup>2</sup> de la pièce / nombre d'entrées d'air  $\geq 10$ .

Classe ESA 5 :  $D_{n,e,w} + C_{tr} \geq 39$  dB,  
 exigé si surface en m<sup>2</sup> de la pièce / nombre d'entrées d'air  $< 10$ .

Les entrées d'air EAA 22 + RA et EA 30 + RA assurent un isolement acoustique  $D_{n,e,w} (C_{tr})$  égal à 41 dB, correspondant à un classement de façade de 35 dB.

Elles sont réalisées en polystyrène blanc ou sur demande dans les couleurs suivantes : Beige, Bronze, Chêne clair, Chêne doré, Chêne foncé, Gris, Gris foncé, Gris anthracite, Noir & Marron.

 Blanc - RAL 9016	 Bronze - RAL 8019	 Chêne doré - RAL 8003	 Gris - RAL 7035	 Gris anthracite - RAL 7016	 Marron - RAL 8004
 Beige - RAL 1013	 Chêne clair - RAL 1011	 Chêne foncé - RAL 8024	 Gris foncé - RAL 7011	 Noir - RAL 9011	

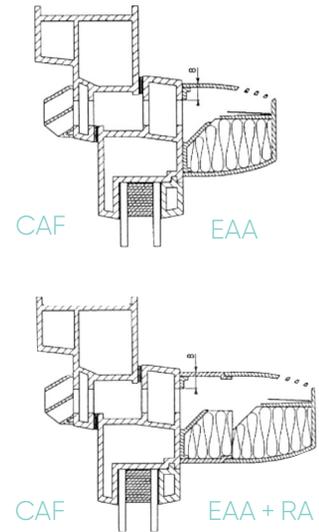
Les teintes réelles peuvent légèrement différer de celles du nuancier.

Les entrées d'air EAA fonctionnent sur parois verticales et sur tous plans inclinés (exemple : fenêtre de toit, sous face de coffre de volet roulant, ...).

## MISE EN OEUVRE



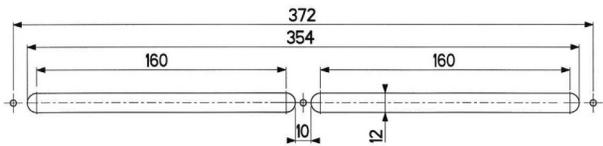
- A : Entrée d'air (EAA)      C : Grille de façade standard (G)  
 B : Entrée d'air + rallonge acoustique (EAA + RA)  
 D : Capuchon de façade acoustique (C)



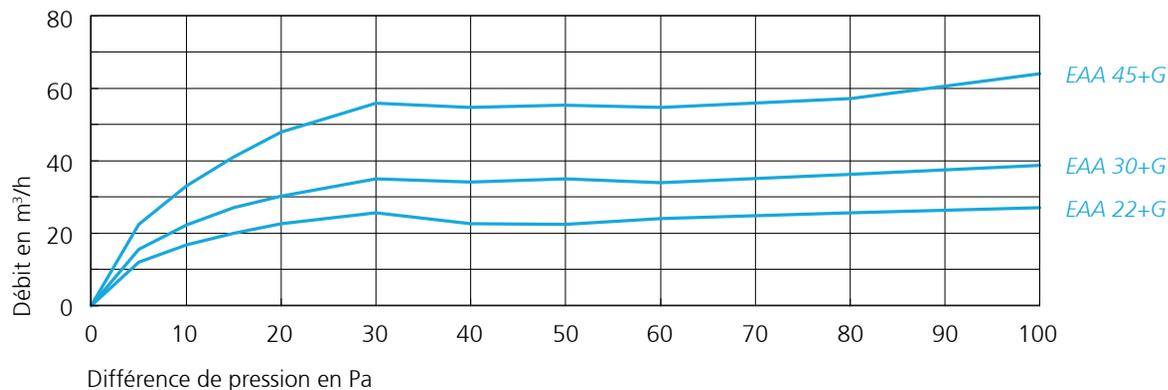
Le socle est posé en applique sur la menuiserie et fixé par vis. L'entaille dans la menuiserie peut être placée en position haute ou centrée sur le socle (position haute seulement pour l'EAA 45)

Le capot ou l'ensemble rallonge acoustique + capot se monte par simple emboîtement sur le socle.

Côté extérieur, on installe un capuchon de façade type CAF fixé par vis.



## CARACTÉRISTIQUES AÉRAULIQUES

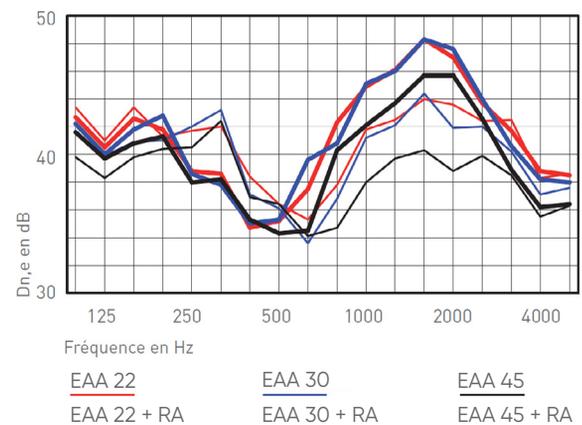


## CARACTÉRISTIQUES ACOUSTIQUES

Les entrées d'air sont caractérisées par leur isolement acoustique  $D_{n,e,w}(Ctr)$  (Rapports d'essais CSTB VE-AC 08-26012992 / 09-26024157 / 09-26025288).

Caractéristiques acoustiques similaires sans capuchon de façade CAF (G).

Type	$D_{n,e,w}(C)$	$D_{n,e,w}(Ctr)$
EAA 22 + G	39 dB	39 dB
EAA 30 + G	39 dB	39 dB
EAA 45 + G	37 dB	37 dB
EAA 22 + RA + G	41 dB	41 dB
EAA 30 + RA + G	41 dB	41 dB
EAA 45 + RA + G	39 dB	39 dB



# MULTI-SPLIT STANDARD

**MXZ R32** NOUVEAU

## TECHNOLOGIE INVERTER

- Chauffage garanti jusqu'à -15°C extérieur
- Consommation électrique maîtrisée
- Régulation précise
- Technologie R32



MXZ-2F33VF  
MXZ-2F42VF  
MXZ-2F53VF



MXZ-3F54VF  
MXZ-3F68VF  
MXZ-4F72VF  
MXZ-4F80VF

**NOUVEAU**

DISPO JUNI 2019

<b>R32</b> <b>INVERTER</b>		MXZ-3F54VF	MXZ-3F68VF	MXZ-4F72VF	MXZ-4F80VF
❄️	Puissance frigorifique nominale (mini/maxi) kW	5.4 (2.9 / 6.8)	6.8 (2.9 / 8.4)	7.2 (3.7 / 8.8)	8.0 (3.7 / 9.0)
	Puissance absorbée totale nominale kW	1.320	1.840	1.850	2.25
	EER* / Classe énergétique	4.09 / A	3.70 / A	3.89 / A	3.56
	SEER** / Classe énergétique saisonnière	8.52 <b>A+++</b>	7.96 <b>A++</b>	8.13 <b>A++</b>	7.55 <b>A++</b>
	Plage de fonctionnement (T°ext. sèche/sèche) °C	-10 / +46	-10 / +46	-10 / +46	-10 / +46
⚙️	Puissance calorifique nominale (mini/maxi) kW	7.0 (2.6 / 9.0)	8.6 (2.6 / 10.6)	8.6 (3.4 / 10.7)	9.0 (3.4 / 11.0)
	Puissance calorifique nominale à -7°C (max) kW	4.7 (6.3)	5.8 (7.4)	5.8 (7.5)	6.0 (7.7)
	Puissance absorbée totale nominale kW	1.400	1.910	1.870	2.0
	COP* / Classe énergétique	5.00 / A	4.50 / A	4.60 / A	4.40
	SCOP** / Classe énergétique saisonnière	4.61 <b>A++</b>	4.12 <b>A+</b>	4.07 <b>A+</b>	4.07 <b>A+</b>
Plage de fonctionnement (T°ext. humide/sèche) °C	-15 / +24	-15 / +24	-15 / +24	-15 / +24	
Débit d'air en froid	GV m³/h	1860	2124	2124	2418
Pression acoustique en froid à 1 m GV	GV*** dB(A)	46	48	48	50
Puissance acoustique en froid	GV dB(A)	60	63	63	65
Hauteur x Largeur x Profondeur	mm	710 x 840 x 330	710 x 840 x 330	710 x 840 x 330	710 x 840 x 330
Poids net	kg	57	57	58	59
<b>DONNÉES FRIGORIFIQUES</b>					
Diamètre liquide	pouce	3 x 1/4" flare	3 x 1/4" flare	4 x 1/4" flare	4 x 1/4" flare
Diamètre gaz	pouce	3 x 3/8" flare	3 x 3/8" flare	3 x 3/8" flare + 1/2" flare	3 x 3/8" flare + 1/2" flare
Longueur maxi	m	50	60	60	60
Longueur maxi UI - UE / Dénivelé maxi****	m	25 / 15	25 / 15	25 / 15	25 / 15
Fluide / PRP (Pouvoir de Réchauffement Planétaire)	- / -	R32 / 675			
Lg préchargée / Précharge / Tonne équivalent CO <sub>2</sub> m / kg / t		Voir manuel installation			
<b>DONNÉES ÉLECTRIQUES</b>					
Alimentation électrique par unité extérieure	V~50Hz	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)
Câble unité extérieure	mm²	3 x 4 mm²	3 x 4 mm²	3 x 4 mm²	3 x 4 mm²
Câble liaison intérieure - extérieure	mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²
Protection électrique	A	25	25	25	25

\* COP et EER calculés avec UE seules \*\* : SCOP et SEER mesurés avec des UE et UI selon EN14825 \*\*\* : mesurée en chambre anéchoïque ; nc : non communiqué  
\*\*\*\* : si l'unité extérieure est installée plus haut que l'unité intérieure, le dénivelé est limité à 10 m

# CASSETTE 600 X 600

**INVERTER**

**R32**

**SLZ-M FA2**

**NOUVEAU**



**RETROUVEZ TOUTES LES DONNÉES DE CE PRODUIT EN SCANNANT CE QR CODE**



Certifications actualisées sur [www.eurovent-certification.com](http://www.eurovent-certification.com)

**INVERTER**



**ESSENTIEL**

**PREMIUM**

p. 129

p. 130



SUZ-M 25/35 VA



SUZ-M 50 VA



SUZ-M 60 VA

- Confort thermique : chauffage jusqu'à -10°C
- Discrétion absolue : unité extérieure à faible niveau sonore
- Groupe mono-ventilateur

R32		INVERTER	SLZ-M25FA2 SUZ-M25VA	SLZ-M35FA2 SUZ-M35VA	SLZ-M50FA2 SUZ-M50VA	SLZ-M60FA2 SUZ-M60VA
	Puissance frigorifique nominale (mini/maxi)	kW	2.5 (1.4 / 3.2)	3.5 (0.7 / 3.9)	4.6 (1.0 / 5.2)	5.7 (1.5 / 6.3)
	Puissance absorbée totale nominale	kW	0.657	1.093	1.352	1.676
❄️	EER / Classe énergétique	-	3.80 / A	3.20 / B	3.40 / A	3.40 / A
	SEER / Classe énergétique saisonnière	-	6.30 <b>A**</b>	6.70 <b>A**</b>	6.30 <b>A**</b>	6.20 <b>A**</b>
	Plage de fonctionnement (T°ext. sèche/sèche)	°C	-10 / +46	-10 / +46	-15 / +46	-15 / +46
	Puissance calorifique nominale à +7°C (min/max)	kW	3.2 (1.3 / 4.2)	4.0 (1.0 / 5.0)	5.0 (1.3 / 5.5)	6.4 (1.6 / 7.3)
	Puissance calorifique nominale à -7°C (mini/maxi)	kW	2.0 (- / 2.7)	2.6 (- / 3.2)	3.2 (- / 3.5)	4.1 (- / 4.7)
☀️	Puissance absorbée totale nominale	kW	0.886	1.078	1.562	2.133
	COP / Classe énergétique	-	3.61 / A	3.71 / A	3.20 / D	3.00 / D
	SCOP / Classe énergétique saisonnière	-	4.30 <b>A*</b>	4.30 <b>A*</b>	4.20 <b>A*</b>	4.10 <b>A*</b>
	Plage de fonctionnement (T°ext. humide/sèche)	°C	-10 / +24	-10 / +24	-10 / +24	-10 / +24

UNITÉS INTÉRIEURES		SLZ-M25FA2	SLZ-M35FA2	SLZ-M50FA2	SLZ-M60FA2
Débit d'air en froid	-/PV/MV/GV/- m³/h	-/390/450/510/-	-/390/480/570/-	-/420/540/690/-	-/450/690/780/-
Pression acoustique* en froid à 1,5 m	-/PV/MV/GV/- dB(A)	-/25/28/31/-	-/25/30/34/-	-/27/34/39/-	-/32/40/43/-
Puissance acoustique en froid	SGV dB(A)	48	51	56	60
Corps : Hauteur x Largeur x Profondeur	mm	245 x 570 x 570			
Façade : Hauteur x Largeur x Profondeur	mm	10 x 625 x 625			
Poids net / poids net de la façade	kg	15 / 3	15 / 3	15 / 3	15 / 3
Diamètre des condensats	mm	32	32	32	32
UNITÉS EXTÉRIEURES		SUZ-M25VA	SUZ-M35VA	SUZ-M50VA	SUZ-M60VA
Débit d'air en froid	GV m³/h	2178	2058	2748	3006
Pression acoustique* en froid à 1 m	GV dB(A)	45	48	48	49
Puissance acoustique en froid	GV dB(A)	59	59	64	65
Hauteur x Largeur x Profondeur	mm	550 x 800 x 285	550 x 800 x 285	714 x 800 x 285	880 x 840 x 330
Poids net	kg	30	35	41	54

DONNÉES FRIGORIFIQUES					
Diamètre liquide	pouce	1/4" flare	1/4" flare	1/4" flare	1/4" flare
Diamètre gaz	pouce	3/8" flare	3/8" flare	1/2" flare	5/8" flare
Longueur maxi / Dénivelé maxi	m	20 / 12	20 / 12	30 / 30	30 / 30
Fluide / PRP (Pouvoir de Réchauffement Planétaire)	- / -	R32 / 675			
Lg préchargée / Précharge / Tonne équivalent CO <sub>2</sub>	m / kg / t	7 / 0.65 / 0.44	7 / 0.90 / 0.61	7 / 1.20 / 0.81	7 / 1.25 / 0.84

DONNÉES ÉLECTRIQUES					
Alimentation électrique par unité extérieure	V~50Hz	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)
Câble unité extérieure	mm²	3 x 2.5 mm²	3 x 2.5 mm²	3 x 4 mm²	3 x 4 mm²
Câble liaison intérieure - extérieure	mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²
Protection électrique	A	10	10	20	20

\* : mesurée en chambre anéchoïque ; nc : non communiqué

CASSETTE

# TÉLÉCOMMANDES FILAIRES ET INFRAROUGES

## TABLEAU DE SYNTHÈSE



MODÈLE	PAR-CT01MA	PAR-40MAA	PAR-U02MEDA	PAC-YT52CRA	PAR-FL32MA	PAR-SL100A-E
	1 à 16 unités	1 unité				
<b>COMMANDE</b>						
Marche/Arrêt	●	●	●	●	●	●
Mode (Froid / Chaud / Déshu / Ventilation)	●	●	●	●	●	●
Température de consigne	●	●	●	●	●	●
Double point de consigne (Chaud/Froid)	●	●	●	●	-	● <sup>(1)</sup>
Limite température de consigne	●	●	●	●	-	-
Vitesse de ventilation	●	●	●	●	●	●
Direction de l'air	●	●	●	●	●	●
<b>AFFICHAGE</b>						
Marche/Arrêt	●	●	●	●	●	●
Mode (Froid / Chaud / Déshu / Ventilation)	●	●	●	●	●	●
Température de consigne	●	●	●	●	●	●
Verrouillage Télécommande	●	●	●	●	●	-
Vitesse de ventilation	●	●	●	●	●	●
Direction de l'air	●	●	●	●	●	●
Température ambiante	●	●	●	-	-	-
État du filtre	●	●	●	-	-	-
Erreur signalée	●	●	●	●	●	-
Code Erreur (4 Chiffres)	●	●	●	●	-	-
<b>PROGRAMMATION HORAIRE</b>						
Journalier	●	●	●	-	-	-
Marche/Arrêt par jour	1	1	1	-	1	1
Semaine	●	●	●	-	-	-
Marche/Arrêt par semaine	8x7	8x7	8x7	-	-	-
Auto - Arrêt temporisation	●	●	●	-	-	-
Paramétrage Tempo. (Min.)	5	5	5	-	10	10
<b>HISTORIQUE</b>						
Erreur	●	●	-	-	-	-
<b>AUTRE</b>						
Limitation Temp. télécommande locale	●	●	●	●	-	-
Limitation Temp. par commande centralisée	●	●	●	●	-	-
Verrouillage commande	●	●	●	●	-	-
Réduit de nuit	●	●	●	●	-	-
Verrouillage Ventilation	-/●	-/●	-/●	-/●	-	-
Réglage par groupe d'unités	●	●	●	●	-	-
Câblage sur connecteur	TB15	TB15	M-Net sur TB5	TB15	IR	IR
3D I-See Sensor	●	●	-	-	-	●
Capteur d'humidité, présence, luminosité	-	-	●	-	-	-

● : disponible - : non disponible IR : infrarouge

(1) Le paramétrage des fonctions de cette télécommande est nécessaire

# TÉLÉCOMMANDES INFRAROUGES

## PAR-FL32/PAR-FA32 OU PAR-SL100



PAR-FL32



PAR-SL100



PAR-SL100A-E PAR-FL32MA PAR-FA32MA



TÉLÉCOMMANDE INFRAROUGE



PROGRAMMATION QUOTIDIENNE

### PAR-FL32 + Récepteur PAR-FA32

La télécommande infrarouge est compatible sur l'ensemble des unités de la gamme City Multi. Il est possible de piloter jusqu'à 16 unités avec un récepteur PAR-FA32MA

### PAR-FL32 + Récepteur PAR-SL94B-E

Avec son récepteur infrarouge encastré dans l'unité il est uniquement compatible avec les plafonniers de la gamme City Multi.

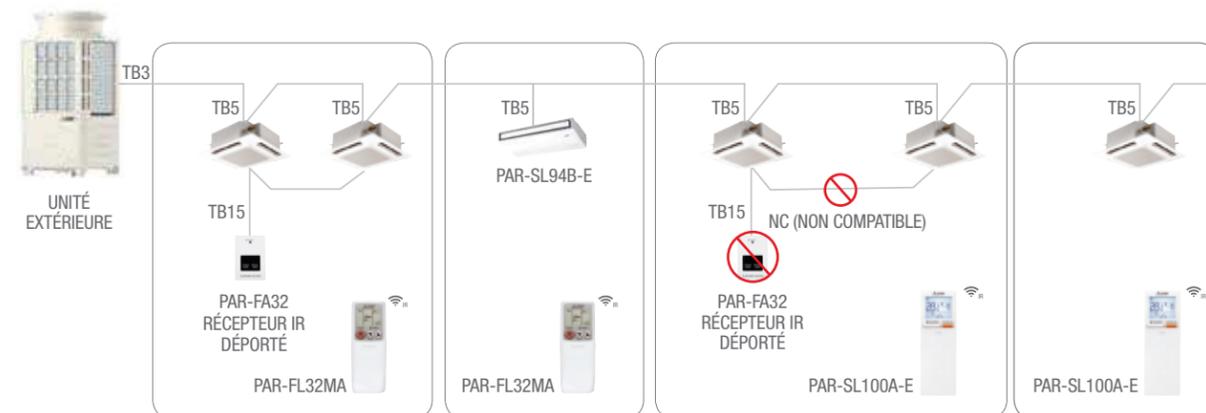
### PAR-SL100

Avec son nouveau design la télécommande infrarouge dispose de plus de fonctionnalité et gère automatiquement notre 3D I see sensor. Celle-ci est uniquement compatible avec nos unités suivantes: PKFY-P\*VLM-E (Nouveau) - PLFY-P\*VEM-E - PLFY-P\*VFM-E1



PAR-SL94B-E (Plafonnier uniquement)

## ARCHITECTURE



MODÈLES	PAR-FL32 + PAR-FA32	PAR-SL100
Marche / Arrêt	●	●
Mode	●	●
Réglage consigne	●	●
Vitesse ventilation	●	●
Code défaut	Clignotement LED	Clignotement LED
Programmation hebdomadaire	-	●
Gestion du 3D I see sensor	-	●
Gestion indépendante des volets	-	●
Etat batterie	-	●



### BON À SAVOIR

Avec le récepteur déporté PAR-FA32, il est possible de piloter jusqu'à 16 unités intérieures

# MURAL ESSENTIEL

## MSZ-HR-VF / MSZ-HJ-VA **NOUVEAU**

DÉCOUVREZ CE MURAL  
EN VIDÉO EN SCANNANT  
CE CODE



### LA SOLUTION ESSENTIELLE EN MURAL

- Positionnement au-dessus d'une porte grâce à la faible largeur
- Faible niveau sonore à partir de 21 dB(A)
- Balayage vertical
- Alimentation depuis le groupe extérieur (MUZ-HR)
- Raccords Flare



CLASSE ÉNERGÉTIQUE<sup>(1)</sup>



SCOP JUSQU'À 4,3



MODE CHAUD -10/+24°C



MODE FROID -10/+46°C



À PARTIR DE 21dB(A)



WIFI COMPATIBLE SUR MSZ-HR UNIQUEMENT

### GAMME PRÉCÉDENTE



MSZ-DM/HJ

Taille 25/35/50

Alimentation par UI

R410A

Option wifi uniquement pour les tailles 25/35

### NOUVELLE GAMME



MSZ-HR

Taille 25/35/42/50

Alimentation par UE

R32

Option wifi pour toutes les tailles HR

### TÉLÉCOMMANDES D'ORIGINE



INFRAROUGE Pour mural MSZ-HR



INFRAROUGE Pour mural MSZ-HJ



### SUPPORT TÉLÉCOMMANDE EN OPTION

MAC-1200RC **DISPO JUIN 2019**

### TÉLÉCOMMANDES EN OPTION VIA MAC-397IF-E



FILAIRE PAR-40 MAA



FILAIRE PAC-YT52



TACTILE BLUETOOTH PAR-CT01 (Existe en noir)

### ACCESSOIRES

UNITÉS INTÉRIEURES	Filter électrostatique anti-allergène à enzyme	Interface commande PAR-40 / PAC-YT52 / PAR-CT01	Interface M-Net	Interface Wi-Fi	Connecteur contact externe
	MAC-2370FT-E	MAC-397IF-E	MAC-334IF-E	MAC-567IF-E	MAC-1702/1710RA-E
MSZ-HR	-	●	●	●	●
MSZ-HJ60/71 VA	●	-	-	-	●

UNITÉS EXTÉRIEURES	Déflecteurs d'air		
	MAC-886SG-E	MAC-889SG-E	MAC-883SG-E
MUZ-HR25/35	-	-	●
MUZ-HR42/50	-	●	-
MUZ-HJ60/71VA	●	-	-

(1) Classe énergétique saisonnière Froid / Chaud

# MURAL ESSENTIEL

## MSZ-HR-VF / MSZ-HJ-VA **NOUVEAU**



Certifications actualisées sur [www.eurovent-certification.com](http://www.eurovent-certification.com)

MURAL

### TECHNOLOGIE **INVERTER**

- Chauffage garanti jusqu'à -10°C extérieur
- Consommation électrique maîtrisée
- Régulation précise
- Technologie R32 (MUZ-HR)
- Technologie R410A (MUZ-HJ)



MUZ-HR25/35 VF



MUZ-HR42/50 VF



MUZ-HJ60/71 VA

### NOUVEAU

R32

R410A

<b>INVERTER</b>		MSZ-HR25VF	MSZ-HR35VF	MSZ-HR42VF	MSZ-HR50VF
		MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF
❄️	Puissance frigorifique nominale (mini/maxi) kW	2.5 (0.5 / 2.9)	3.4 (0.9 / 3.4)	4.2 (1.1 / 4.5)	5.0 (1.3 / 5.0)
	Puissance absorbée totale nominale kW	0.800	1.210	1.340	2.050
	EER / Classe énergétique	3.13 / B	2.81 / C	3.13 / B	2.44 / E
	SEER / Classe énergétique saisonnière	6.20 <b>A++</b>	6.20 <b>A++</b>	6.50 <b>A++</b>	6.50 <b>A++</b>
Plage de fonctionnement (T°ext. sèche/sèche) °C		-10 / +46	-10 / +46	-10 / +46	-10 / +46
⚙️	Puissance calorifique nominale (mini/maxi) kW	3.2 (0.5 / 3.5)	3.6 (0.9 / 3.7)	4.7 (0.9 / 5.4)	5.4 (1.4 / 6.5)
	Puissance calorifique nominale à -7°C (max) kW	2.1 (2.4)	2.4 (2.5)	3.2 (3.6)	3.6 (4.4)
	Puissance absorbée totale nominale kW	0.850	0.975	1.300	1.550
	COP / Classe énergétique	3.71 / A	3.69 / A	3.62 / A	3.48 / B
	SCOP / Classe énergétique saisonnière	4.20 <b>A+</b>	4.30 <b>A+</b>	4.30 <b>A+</b>	4.30 <b>A+</b>
Plage de fonctionnement (T°ext. humide/sèche) °C		-10 / +24	-10 / +24	-10 / +24	-10 / +24

MSZ-HJ60VA	MSZ-HJ71VA		
MUZ-HJ60VA	MUZ-HJ71VA		
Puissance frigorifique nominale (mini/maxi) kW	6.1 (1.7 / 7.1)	7.1 (1.8 / 7.1)	
Puissance absorbée totale nominale kW	1.900	2.330	
EER / Classe énergétique	3.21 / A	3.05 / B	
SEER / Classe énergétique saisonnière	6.00 <b>A+</b>	5.60 <b>A+</b>	
Plage de fonctionnement (T°ext. sèche/sèche) °C		+15 / +46	+15 / +46
Puissance calorifique nominale (mini/maxi) kW	6.8 (1.5 / 8.4)	8.1 (1.5 / 8.5)	
Puissance calorifique nominale à -7°C (max) kW	4.6 (nc)	5.4 (nc)	
Puissance absorbée totale nominale kW	1.970	2.440	
COP / Classe énergétique	3.45 / B	3.32 / C	
SCOP / Classe énergétique saisonnière	4.10 <b>A+</b>	4.00 <b>A+</b>	
Plage de fonctionnement (T°ext. humide/sèche) °C		-10 / +24	-10 / +24

UNITÉS INTÉRIEURES		MSZ-HR25VF	MSZ-HR35VF	MSZ-HR42VF	MSZ-HR50VF
Débit d'air en froid	-/PV/MV/GV/SGV m³/h	-/216/324/432/582	-/216/336/468/702	-/360/522/648/786	-/384/522/672/786
Pression acoustique en froid à 1 m	-/PV/MV/GV/SGV* dB(A)	-/21/30/37/43	-/21/30/37/44	-/24/32/39/45	-/28/36/40/45
Puissance acoustique en froid	SGV dB(A)	57	60	60	60
Hauteur x Largeur x Profondeur	mm	280 x 838 x 228			
Poids net	kg	8.5	8.5	9.0	9.0
Diamètre des condensats	mm	16	16	16	16

MSZ-HJ60VA	MSZ-HJ71VA	
Débit d'air en froid	-/558/732/900/1194	-/600/732/900/1194
Pression acoustique en froid à 1 m	-/31/38/44/50	-/33/38/44/50
Puissance acoustique en froid	65	65
Hauteur x Largeur x Profondeur	305 x 923 x 250	305 x 923 x 250
Poids net	13.0	13.0
Diamètre des condensats	16	16

UNITÉS EXTÉRIEURES		MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF
Débit d'air en froid	GV m³/h	1818	1932	2058	2058
Pression acoustique en froid à 1 m	GV dB(A)	50	51	51	51
Puissance acoustique en froid	GV dB(A)	nc	nc	nc	nc
Hauteur x Largeur x Profondeur	mm	538 x 699 x 249	538 x 699 x 249	550 x 800 x 285	550 x 800 x 285
Poids net	kg	23	24	34	35

MUZ-HJ60VA	MUZ-HJ71VA	
Débit d'air en froid	2874	2958
Pression acoustique en froid à 1 m	55	55
Puissance acoustique en froid	65	66
Hauteur x Largeur x Profondeur	880 x 840 x 330	880 x 840 x 330
Poids net	55	55

DONNÉES FRIGORIFIQUES					
Diamètre liquide	pouce	1/4" flare	1/4" flare	1/4" flare	1/4" flare
Diamètre gaz	pouce	3/8" flare	3/8" flare	3/8" flare	3/8" flare
Longueur maxi / Dénivelé maxi	m	20 / 12	20 / 12	20 / 12	20 / 12
Fluide / PRP (Pouvoir de Réchauffement Planétaire)	- / -	R32 / 675			
Lg préchargée / Précharge / Tonne équivalent CO <sub>2</sub>	m / kg / t	7 / 0.40 / 0.27	7 / 0.45 / 0.30	7 / 0.70 / 0.47	7 / 0.80 / 0.54

DONNÉES FRIGORIFIQUES	
Diamètre liquide	1/4" flare / 3/8" flare
Diamètre gaz	5/8" flare / 5/8" flare
Longueur maxi / Dénivelé maxi	30 / 15 / 30 / 15
Fluide / PRP (Pouvoir de Réchauffement Planétaire)	R410A / 2088
Lg préchargée / Précharge / Tonne équivalent CO <sub>2</sub>	7 / 1.80 / 3.76 / 7 / 1.80 / 3.76

DONNÉES ÉLECTRIQUES					
Alim. élect. par UE (HR) / par UI (HJ)**	V~50Hz	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)	230V (1P+N+T)
Câble unité extérieure	mm²	3 x 2.5 mm²	3 x 2.5 mm²	3 x 2.5 mm²	3 x 2.5 mm²
Câble liaison intérieure - extérieure	mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²	4 x 1.5 mm²
Protection électrique	A	10	10	10	10

DONNÉES ÉLECTRIQUES	
Alim. élect. par UE (HR) / par UI (HJ)**	230V (1P+N+T) / 230V (1P+N+T)
Câble unité extérieure	3 x 2.5 mm² / 3 x 2.5 mm²
Câble liaison intérieure - extérieure	4 x 1.5 mm² / 4 x 1.5 mm²
Protection électrique	16 / 16

\* : mesurée en chambre anéchoïque ; nc : non communiqué \*\* UI = unité intérieure / UE : unité extérieure

# NOTICES

# PETITES CAPACITÉS

Chauffe-eau électrique

Electric water heater

## NOTICE D'UTILISATION ET D'INSTALLATION

Installation and operating manual

À conserver par l'utilisateur

Manual must be kept by end user

F

EN



# PETITES CAPACITÉS

Chauffe-eau électrique

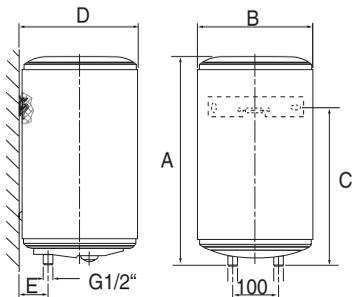


Nous vous remercions de votre choix et de votre confiance. Le chauffe-eau PETITES CAPACITÉS a été soumis à de nombreux tests et contrôles afin d'en assurer la qualité et ainsi vous apporter une entière satisfaction.

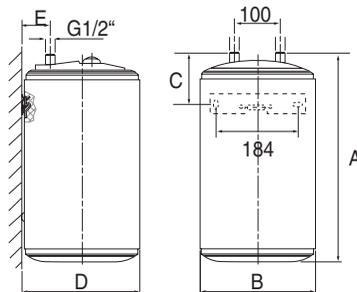
# CARACTERISTIQUES TECHNIQUES ET DIMENSIONNELLES CARACTERÍSTICAS TÉCNICAS Y DIMENSIONALES TECHNISCHE EIGENSCHAPPEN EN AFMETINGEN TECHNICAL CHARACTERISTICS AND DIMENSIONS

MODELES	CAPACITES en litres	PUISSANCE en W	CONSOMMATION KWh/24h à 65°C	DIMENSIONS en mm					POIDS en kg
				A	B	C	D	E	
MODELLOS	CAPACIDADES en litros	POTENCIA en W	CONSUMO KWh/24h a 65°C	DIMENSIONES en mm					PESO en kg
MODELLEN	INHOUD liter	VERMOGEN in W	VERBRUIK KWu/24u bij 65°C	AFMETINGEN in mm					GEWICHT in kg
MODELS	CAPACITY in litres	VOLTAGE in W	CONSUMPTION KWh/24h at 65°C	DIMENSIONS in mm					WEIGHT in kg
				A	B	C	D	E	
PC 10 R	10	1600	0,43	456	255	289	262	64	8,5
PC 10 S	10	2000	0,63	456	255	218	262	64	8,5
PC 15 R	15	2000	0,51	496	287	327	294	70	10
PC 15 S	15	2000	0,68	496	287	218	294	70	10
PC 15 RB	15	1600	0,51	399	338	236	345	81	10
PC 15 SB	15	2000	0,66	399	338	164	345	81	10
PC 30	30	2000	0,73	623	338	463	345	81	14,5
PC 50	50	2000	0,99	918	338	750	345	81	20

## INSTALLATION / INSTALACIÓN / INSTALLATIE / INSTALLATION



**Sur évier / Sobre fregadero**  
**Boven de gootsteen / Above sink**



**Sous évier / Bajo fregadero**  
**onder de gootsteen / Under sink**

**IMPORTANT** : Les chauffe-eau "SUR-EVIER" doivent **impérativement** s'installer **tubes vers le bas**.  
Les chauffe-eau "SOUS-EVIER" doivent **impérativement** s'installer **tubes vers le haut**

**IMPORTANTE** : Los calentadores de agua "SOBRE FREGADERO" deben instalarse **imperativamente con los tubos hacia abajo**. Los calentadores de agua "BAJO FREGADERO" deben instalarse **imperativamente con los tubos hacia arriba**.

**BELANGRIJK** : De boilers "BOVEN DE GOOTSTEEN" moeten **verplicht met de leidingen onderaan** geïnstalleerd worden. De boilers "ONDER DE GOOTSTEEN" moeten **verplicht met de leidingen bovenaan** geïnstalleerd worden.

**IMPORTANT** : The "above sink" water heaters must **obligatorily** be installed **with the tubes downwards**. The "under sink" water heaters must **obligatorily** be installed **with the tubes upwards**

# USER ADVICE AND RECOMMENDATIONS FOR MAINTENANCE

GB

## Maintenance

A water heater requires little maintenance.

**Domestic maintenance :** for the user, this means operating the pressure relief valve once or twice every month.

**Maintenance by a specialist :** have the equipment inspected every two years.

## Guarantee

### GUARANTEE CONDITIONS

The water heater must be installed by a qualified person in accordance with standard practice, standards in force and the requirements of these technical instructions. It shall be used normally and shall be maintained regularly.

Under these conditions, our guarantee covers free exchange or supply to our distributor of parts that we recognise as being defective, or possibly the entire unit, excluding labour and transport costs, and any indemnity and extension of guarantee. Our guarantee starts on the installation date (the purchase or installation invoice having probatory force) ; if no invoice is available, the start date will be the date of manufacture shown on the water heater name plate + 6 months.

A unit supposed to have caused damage is not to be moved and must remain at the disposal of experts. The victim of the damage must warn his insurance company.

### GUARANTEE LIMITS

This guarantee excludes failures due to :

Abnormal environmental conditions :

Various damages caused by shocks or dropping during handling after departure from the factory.

Positioning the heater in a location subjected to frost or humid, aggressive or badly ventilated environments. Use of water with aggressiveness criteria such as those defined by national technical rules for plumbing and hot water (content of chlorides, sulphates, calcium, resistivity and TAC). Water pressure greater than 5 bars. Electrical power supply with high overvoltages (mains, lightning...).

Damage resulting from undetectable problems due to the choice of the location (difficult access) and which would have been avoided if the heater was immediately repaired.

An installation not in conformity with the regulations, standards and standard practice, and particularity :

New pressure relief valve missing or not installed according to national standards, or modification to its setting... No couplings (cast iron, steel or insulating) on the hot water connection pipes which may cause corrosion. Defective electrical connection : not in conformity with national standards, incorrect earthing. The heater was switched on without filling first (dry heating). The heater is put in a position that is not in conformity with the user's instructions.

Defective maintenance :

Abnormal scaling of heating elements or safety devices. Failure to properly maintain the pressure relief valve resulting in overpressure. Modification to original equipment without the manufacturer's opinion, or use of spare parts not referenced by manufacturer.

**The failure of a component may never be a reason for replacing the whole unit.  
The complete set of spare parts is held at your disposal by the manufacturer.**

# NOTICE D'INSTALLATION ET D'UTILISATION

F

## Mise en place du chauffe-eau

Le positionner le plus près possible du lieu d'utilisation.

Placer l'appareil à l'abri du gel (ainsi que les tuyauteries).

Fixer l'étrier sur le mur à l'aide de deux goujons M8 préalablement scellés ou chevillés.

Le montage doit être conforme aux prescriptions du DTU 60-1.

Prévoir un bac de rétention avec écoulement à l'égout si le chauffe-eau est installé au-dessus de locaux habités (combles par exemple).

## Raccordement hydraulique

### MONTAGE EN PRESSION

Le chauffe-eau installé sous pression doit obligatoirement être équipé d'un groupe de sécurité neuf, ce groupe (non fourni par le constructeur) sera obligatoirement conforme à la norme NFD 36-401 et situé le plus près possible du chauffe-eau.

Si la pression nominale du réseau est supérieure à 5 bar, prévoir le montage d'un réducteur de pression sur l'alimentation générale.

Le montage du groupe de sécurité est réalisé sur le tube d'entrée d'eau froide, au plus près du chauffe-eau, l'étanchéité étant à réaliser sur les filets. **Il se trouve en position verticale sur tous les modèles.**

La vidange du groupe de sécurité doit être raccordée à un circuit d'évacuation par l'intermédiaire d'un siphon avec garde d'air. Pendant les périodes de chauffe l'eau contenue dans la cuve va se dilater et la soupape de sécurité en laissera échapper une partie afin que la pression interne ne dépasse pas 7 bar.

Cet écoulement est normal et peut représenter 3% de la capacité de l'appareil à chaque chauffe.

### MONTAGE EN ECOULEMENT LIBRE

Ce montage n'autorise que l'alimentation d'un seul point d'eau chaude et nécessite l'installation d'un robinet mélangeur spécifique.

Dans ce cas, il n'y a pas lieu d'utiliser un groupe de sécurité.

**Attention, un léger écoulement par la robinetterie est normal pendant la chauffe de l'appareil ; la sortie de l'eau chaude ne doit jamais être obstruée.**

DANS LE CAS DE CANALISATION EN CUIVRE, UN MANCHON DIELECTRIQUE DOIT ETRE PLACE SUR LE TUBE DE SORTIE D'EAU CHAUDE.

## Branchement électrique

F

Le chauffe-eau doit être raccordé au réseau au moyen du cordon 3 conducteurs livré avec l'appareil (alimentation monophasée 230 volts avec terre exclusivement).

La mise à la terre est obligatoire, elle est prévue d'origine sur le cordon d'alimentation (fil vert/jaune).

La ligne d'alimentation du chauffe-eau doit comporter un dispositif de coupure omnipolaire, la distance d'ouverture des contacts doit être d'au moins 3 mm.

L'alimentation du chauffe-eau doit être faite suivant les règles de l'art et conformément à la NFC 15-100.

## Mise en service

### REPLISSAGE DU CHAUFFE-EAU

Ouvrir le robinet d'eau chaude (dans tous les cas).

Ouvrir le robinet d'eau froide (situé sur le groupe de sécurité dans le cas d'un montage en pression).

Purger l'air contenu dans le chauffe-eau jusqu'à écoulement de l'eau au robinet d'eau chaude.

### VERIFICATION DU BON FONCTIONNEMENT

Vérifier que les caractéristiques de branchement électrique sont conformes à celles du secteur et que le raccordement à la terre a bien été effectué.

Mettre l'appareil sous tension et vérifier le bon fonctionnement à la première mise en température.

**Il est possible de régler la température de consigne jusqu'à environ 70°C en tournant le bouton de réglage du thermostat.**

**NE JAMAIS METTRE LE CHAUFFE-EAU SOUS TENSION SANS EAU AU RIQUE DE DEGRADER LA RESISTANCE DE CHAUFFE NON COUVERTE PAR LA GARANTIE DU CONSTRUCTEUR.**

## Remplacement éventuel d'éléments constituants

Les pièces pouvant être remplacées sont :

- le thermostat (régulation et sécurité), - l'élément chauffant - le voyant lumineux.

La vidange du chauffe-eau est nécessaire pour le remplacement de l'élément chauffant blindé en modèle sur évier.

Pour toute commande, préciser le type de chauffe-eau, sa capacité, sa date de fabrication (voir indications sur certificat de garantie).

**NOTA : Toute opération de remplacement doit être effectuée par une personne qualifiée et après avoir interrompu l'alimentation électrique.**

## Electrical connection

GB

The water heater must be connected to the mains power supply in using the 3-conductor cable supplied with the equipment (single phased power supply 230 Volts with earthing only).

Earthing is compulsory and is provided inside the supplied cable for power supply (green/yellow wire).

The water heater supply line must be equipped with an all-poles breaking device and the contact opening distance must be at least 3 mm.

The water heater power supply must be made in accordance with standard practice and the standards in force.

## Start up

### FILLING THE WATER HEATER

Open the hot water valve (in all cases).

Open the cold water valve (on the pressure relief valve in case of an installation under pressure).

Let the air inside the water heater come out until water starts flowing from the hot water tap.

### VALIDATING WATER HEATER IS FUNCTIONAL

Check whether the connection characteristics comply with those of the mains and whether the earthing connection is actually made.

Switch the unit on and check whether the water heater works well during its first heating period.

**It is possible to adjust the temperature to about 70°C in turning the thermostat switch.**

**NEVER SWITCH THE WATER HEATER ON WHEN IT IS EMPTY, THIS MAY DAMAGE THE HEATING ELEMENT WHICH IS AND WILL NOT COVERED BY THE MANUFACTURER'S GUARANTEE.**

## Replacement of components

The following parts may be replaced :

- The thermostat (regulation and cut-out), - The heating element, - The pilot light.

The water heater must be drained before replacing the sheathed heating element.

For all orders, please give details such as the water heater type, its capacity, manufacturing date (see guarantee certificate).

**NOTE : All replacement operations must be made by a qualified person, after having disconnected the power supply.**

# INSTALLATION AND USER'S INSTRUCTIONS

GB

## Positioning of the water heater

Place it as close as possible to the place of use.

Place it in a room protected from frost (protect the pipes as well).

Attach the wall bracket to the wall using both of the M8 bolts previously grouted into the wall or fixed using inserts.

The installation must comply with the requirements in force in the country of installation.

Provide a retention tank with flow to the drain if the water heater is installed above inhabited premises (for example attic).

## Hydraulic connection

### INSTALLATION WITH PRESSURE

The water heater installed under pressure must obligatorily be equipped with a new pressure relief valve, this unit (not supplied by the manufacturer) must comply with the applying standards and is to be located as close as possible to the water heater.

If the nominal network pressure exceeds 5 bars, install a pressure reducer on the mains supply line.

The pressure relief valve is to be fitted directly on the cold water inlet tube, as near as possible to the water heater, this connection being sealed on the threads. **It must be installed vertically on all models.**

The unit drain must be connected to a drain circuit through a siphon with an air trap. During heating periods, the water inside the tank will expand and the pressure relief valve will allow part to escape so that the internal pressure in the tank does not exceed 7 bars.

This flow is normal and may be as high as 3% of the capacity of the unit during each heating period.

### FREE FLOW INSTALLATION

This installation allows to feed only one hot water tap and requires the installation of a special mixing tap. In that case it is not necessary to use a pressure relief valve.

**Caution, some water may flow from the tap. This is normal during the heating period ; the hot water outlet must never be obstructed.**

FOR COPPER PIPES, AN ISOLATING SLEEVE MUST BE PLACED ON THE HOT WATER OUTLET.

# CONSEILS A L'USAGER - RECOMMANDATIONS D'ENTRETIEN

F

## Entretien

Un chauffe-eau nécessite peu d'entretien.

**L'entretien domestique** : pour l'utilisateur, manœuvrer le groupe de sécurité une à deux fois par mois.

**L'entretien par un spécialiste** : tous les deux ans, il est nécessaire de faire procéder à un contrôle des équipements.

## Garantie

### CONDITIONS DE GARANTIE

Le chauffe-eau doit être installé par une personne qualifiée conformément aux règles de l'art, aux normes en vigueur et aux prescriptions des notices techniques.

Il sera utilisé normalement et régulièrement entretenu.

Dans ces conditions, notre garantie s'exerce par échange ou fourniture gratuite à notre distributeur des pièces reconnues défectueuses par nos services, ou le cas échéant de l'appareil, à l'exclusion des frais de main-d'œuvre et de transport ainsi que de toutes indemnité et prolongation de garantie. Notre garantie prend effet à compter de la date de pose (facture d'achat ou d'installation faisant foi) ; en l'absence de justificatif, la date de prise en compte sera celle de fabrication indiquée sur la plaque signalétique du chauffe-eau majorée de six mois. Un appareil présumé à l'origine d'un sinistre doit rester sur place à la disposition des experts, le sinistré doit en informer son assureur.

### LIMITES DE GARANTIES

Sont exclues de cette garantie les défaillances dues à :

Des conditions d'environnement anormales :

Dégâts divers provoqués par des chocs ou des chutes au cours des manipulations après départ usine. Positionnement de l'appareil dans un endroit soumis au gel ou aux intempéries (ambiances humides, agressives ou mal ventilées). Utilisation d'une eau présentant des critères d'agressivité tels que ceux définis par le DTU plomberie 60-1 additif 4 eau chaude (taux de chlorures, sulfates, calcium, résistivité et TAC). Pression d'eau supérieure à 5 bar. Alimentation électrique présentant des surtensions importantes (réseau, foudre,...) Dégâts résultant de problèmes non décelables en raison du choix de l'emplacement (endroit difficilement accessible) et qui auraient pu être évités par une réparation immédiate de l'appareil.

Une installation non conforme à la réglementation, aux normes et aux règles de l'art, notamment :

Absence ou montage incorrect d'un groupe de sécurité neuf et conforme à la norme NFD 36-401, modification de son tarage... Absence de manchon (fonte, acier ou isolant) sur les tuyaux de raccordement eau chaude pouvant entraîner sa corrosion. Raccordement électrique défectueux : non conforme à la norme NFC 15-100, mise à la terre incorrecte. Mise sous tension de l'appareil sans remplissage (chauffe à sec). Positionnement de l'appareil non conforme aux consignes de la notice.

Un entretien défectueux :

Entartrage anormal des éléments chauffants ou des organes de sécurité. Non entretien du groupe de sécurité se traduisant par des surpressions. Modification des équipements d'origine, sans avis du constructeur ou emploi de pièces détachées non référencées par celui-ci.

**La défaillance d'un composant ne justifie en aucun cas le remplacement de l'appareil.  
Le constructeur tient à votre disposition l'ensemble des pièces détachées.**



# CERTIFICAT DE GARANTIE

À CONSERVER PAR L'UTILISATEUR DE L'APPAREIL

## ■ DURÉE DE GARANTIE

- 3 ans pour la cuve du chauffe-eau.
- 1 an pour l'appareillage électrique et les équipements amovibles.

## ■ GUARANTEE CERTIFICATE - To be kept by the heater user - Guarantee period

- 3 years for the tank of the water heater.
- 1 year for the electrical equipment and the removable elements.

- Le remplacement d'un composant ou d'un produit ne peut en aucun cas prolonger la durée initiale de la garantie.
- Notre responsabilité ne saurait être engagée pour des dommages causés par une mauvaise installation ou par le non-respect des instructions se trouvant dans le document. **ATTENTION:** un produit présumé à l'origine d'un sinistre doit rester sur site à la disposition des experts d'assurance et le sinistré doit en informer son assureur. Tout remplacement doit se faire en accord avec l'assurance.
- Replacement of any component or product will in no case result in the extension of the initial guarantee period.
- Our responsibility can not be liable for damage caused by an improper installation or failure to follow instructions in this document. **WARNING:** in the case of an insured event, the product has to be available to insurance adjusters and the victim has to inform his insurance provider. Insurance needs to agree with any replacement.

DATE D'ACHAT : .....  
Purchase date

NOM ET ADRESSE DU CLIENT : .....  
Name-Address

MODÈLE ET N° DE SÉRIE : .....  
À relever sur l'étiquette signalétique du chauffe-eau  
Model and serial n° refer to the identification label of the water heater

BIP  
Rue Monge - BP 65  
F-85002 LA ROCHE SUR YON  
International : consultez votre installateur

[www.atlantic.fr](http://www.atlantic.fr)

Cachet du revendeur  
Stamp of the retailer

# NOTICE DE MONTAGE

## AX 100 à 315 BC

524748 à 524753



## 1. AVERTISSEMENTS



### AVANT L'INSTALLATION, LIRE ATTENTIVEMENT LES INSTRUCTIONS CI-DESSOUS :

En cas d'inobservation des conseils et avertissements contenus dans cette notice, le fabricant ne peut-être considéré comme responsable des dommages subis par les personnes ou les biens.

La notice décrit comment installer, utiliser et entretenir correctement l'appareil, son respect permet d'en garantir l'efficacité et la longévité.

Ne pas utiliser cet appareil pour un usage différent de celui pour lequel il est destiné.

Après déballage, assurez-vous qu'il est en bon état, sinon adressez-vous à votre revendeur pour toute intervention.

L'utilisation d'un appareil électrique implique le respect des règles fondamentales suivantes :

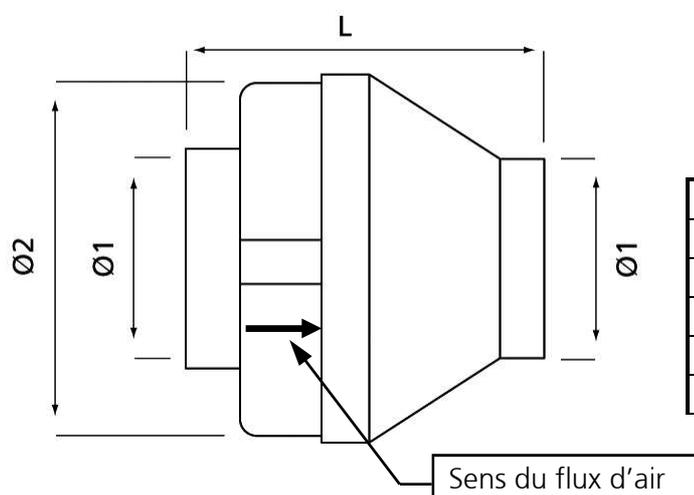
- Ne pas toucher l'appareil avec une partie du corps humide ou mouillée (mains, pieds, ...)
- Cet appareil n'est pas prévu pour être utilisé par des personnes (y compris les enfants) dont les capacités physiques, sensorielles ou mentales sont réduites ou des personnes dénuées d'expérience ou de connaissance, sauf si elles ont pu bénéficier, par l'intermédiaire d'une personne responsable de leur sécurité, d'une surveillance ou d'instructions préalables concernant l'utilisation de l'appareil. Il convient de surveiller les enfants pour s'assurer qu'ils ne jouent pas avec l'appareil.
- Ne raccorder l'appareil au réseau que si ce dernier correspond aux caractéristiques inscrites sur la plaque signalétique
- Avant d'effectuer toute opération sur l'appareil, couper l'alimentation électrique et s'assurer qu'elle ne peut pas être rétablie accidentellement.
- Si le câble d'alimentation est endommagé, il doit être remplacé par le fabricant, son SAV ou une personne de qualification similaire afin d'éviter tout danger.

## 2. DESCRIPTION

### 2.1 Généralités

- Alimentation : mono 230V.
- Turbine centrifuge à réaction.
- Moteur monophasé 230V - 50Hz à rotor extérieur IP 44 de classe F.
- Enveloppe en acier galvanisé.
- Aspiration et rejet en ligne.
- Boîte de raccordement électrique extérieure.
- Régulation possible (voir paragraphe accessoires).

### 2.2 Dimensions / Plans



	Ø1	Ø2	L	Poids (kg)
AX 100 BC	98	237	200	3
AX 125 BC	123	237	202	3
AX 160 BC	158	278	203	4
AX 200 BC	198	333	240	5
AX 250 BC	248	333	211	5
AX 315 BC	313	447	300	7

	P. Abs W	Intensité maxi A	Vitesse tr/min	Débit maxi m <sup>3</sup> /h
AX 100 BC	58	0.26	2580	180
AX 125 BC	52	0.23	2640	315
AX 160 BC	113	0.50	2650	500
AX 200 BC	105	0.45	2700	880
AX 250 BC	105	0.45	2700	920
AX 315 BC	123	0.64	2580	1340

### 3. INSTALLATION / MONTAGE DU PRODUIT

Laisser un espace libre afin d'accéder facilement à l'appareil pour l'entretien

- installation dans toutes les positions, directement sur la gaine, en extraction ou soufflage.
- température d'utilisation : de -20°C à + 40°C

### 4. RACCORDEMENT ELECTRIQUE

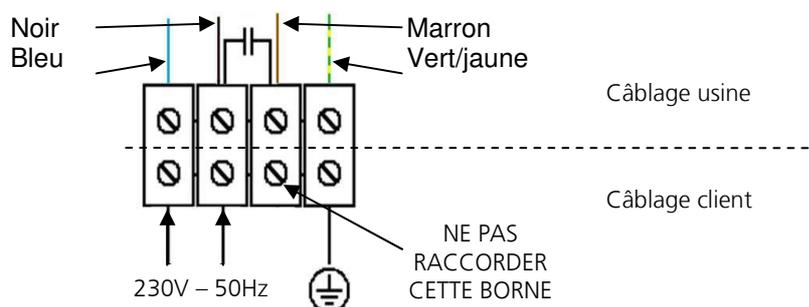


**AVANT TOUTE OPERATION, DECONNECTER L'APPAREIL DU RESEAU ET S'ASSURER QUE L'ALIMENTATION NE PEUT PAS ETRE RETABLIE ACCIDENTELLEMENT.**

Ce matériel doit être installé par des personnes ayant une qualification appropriée.

L'installation doit répondre à la norme NF C 15-100 et aux règles de l'art. Chaque produit ou composant entrant dans cette installation doit également être conforme aux normes qui lui sont applicables.

- Assurez-vous que les caractéristiques du réseau sont compatibles avec l'appareil à brancher.
- Protection par disjoncteur omnipolaire en amont avec ouverture des contacts de 3mm minimum (non fourni).
- Câble d'alimentation trois conducteurs double isolation, section 3x0.75mm<sup>2</sup> de type H05VV-F au minimum.
- Diamètre extérieur maximum du câble 11mm. Dénudage des conducteurs sur 8 mm de manière à ne pas risquer d'entrer en contact avec d'autres fils ou des parties métalliques
- Les fils ne devront pas être serrés sur l'isolant.



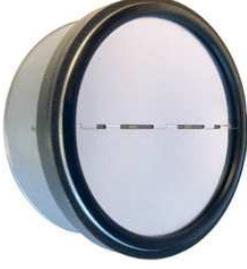
### 5. ENTRETIEN

#### Toujours travailler hors tension

Tous les six mois, dépoussiérer la turbine à l'aide d'un pinceau sec.

Ne jamais utiliser des produits agressifs (acétone, trichloréthylène, ...) ou un nettoyeur haute pression.

## 6. ACCESSOIRES

						
	Jeu de 2 manchettes de suspension		Volets automatiques avec ressort de rappel		Support latéraux	
	TYPE	CODE	TYPE	CODE	TYPE	CODE
AX 100 BC	MS 100	523 102	VF 100	523 104	SUP 1	523 121
AX 125 BC	MS 125	523 115	VF 125	523 106	SUP 1	523 121
AX 160 BC	MS 160	523 116	VF 160	523 108	SUP 1	523 121
AX 200 BC	MS 200	523 117	VF 200	523 110	SUP 2	523 122
AX 250 BC	MS 250	523 118	VF 250	523 112	SUP 2	523 122
AX 315 BC	MS 315	523 119	VF 315	523 114	SUP 3	523 123

### Autotransformateurs

VAM 1	Code 311 050	I maxi 1A
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### Variateurs électroniques

Vitesse réglable de 20% à 100%

VEM 1	Code 311 722	I maxi 1A
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## 7. GARANTIE

Cet appareil est garanti deux ans à compter de la date d'achat contre tous défauts de fabrication. Dans ce cadre, ATLANTIC Climatisation et Ventilation assure l'échange ou la fourniture des pièces reconnues défectueuses après expertise par son service après vente. En aucun cas, la garantie ne peut couvrir les frais annexes, qu'il s'agisse de main d'œuvre, déplacement ou indemnité de quelque nature qu'elle soit. La garantie ne couvre pas les dommages dus à une installation non conforme à la présente notice, une utilisation impropre ou une tentative de réparation par du personnel non qualifié. En cas de problème, merci de vous adresser à votre installateur ou, à défaut, à votre revendeur.

## 8. PROTECTION DE L'ENVIRONNEMENT

Traitement des appareils électriques ou électroniques en fin de vie (applicable dans les pays de l'union européenne et les autres pays disposant de systèmes de collecte sélective) Ce logo indique que ce produit ne doit pas être traité avec les déchets ménagers. Il doit être remis à un point de collecte approprié pour le recyclage des équipements électriques et électroniques. Pour toute information supplémentaire au sujet du recyclage de ce produit, vous pouvez contacter votre municipalité, votre déchetterie ou le magasin où vous avez acheté le produit.



### Atlantic Climatisation et Ventilation

13, Bd Monge - ZI - BP 71 - 69882 Meyzieu Cedex  
N° Azur : 04 72 45 19 45  
www.atlantic-pros.fr

Cachet de l'installateur :

**Revision F:**

- Chart of heating capacity and total input for **MXZ-4F83VFHZ**- [E1] have been corrected.
  - Outdoor unit power supply for **MXZ-4F83VF**- [ET1] and **MXZ-5F102VF**- [ET1] have been corrected.
- OBH790 REVISED EDITION-E is void.

# OUTDOOR UNIT

# SERVICE MANUAL


**No. OBH790  
REVISED EDITION-F**

## Models

**MXZ-2F33VF** - [E1], [ET1]

**MXZ-2F33VF2** - [E1], [ET1]

**MXZ-2F33VF3** - [E1], [ET1]

**MXZ-2F42VF** - [E1], [ET1]

**MXZ-2F42VF2** - [E1], [ET1]

**MXZ-2F42VF3** - [E1], [ET1]

**MXZ-2F53VF** - [E1], [ET1]

**MXZ-2F53VF2** - [E1], [ET1]

**MXZ-2F53VF3** - [E1], [ET1]

**MXZ-2F53VFH** - [E1]

**MXZ-2F53VFH2** - [E1]

**MXZ-2F53VFH3** - [E1]

**MXZ-3F54VF** - [E1], [ET1], [E2], [ET2]

**MXZ-3F54VF2** - [E1], [ET1]

**MXZ-3F54VF3** - [E1], [ET1]

**MXZ-3F68VF** - [E1], [ET1], [E2], [ET2]

**MXZ-3F68VF2** - [E1], [ET1]

**MXZ-3F68VF3** - [E1], [ET1]

**MXZ-4F72VF** - [E1], [ET1], [E2], [ET2]

**MXZ-4F72VF2** - [E1], [ET1]

**MXZ-4F72VF3** - [E1], [ET1]

**MXZ-4F80VF2** - [E1], [ET1]

**MXZ-4F80VF3** - [E1], [ET1]

**MXZ-4F83VF** - [E1], [ET1]

**MXZ-5F102VF** - [E1], [ET1]

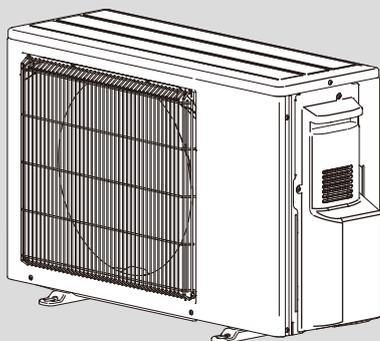
**MXZ-6F122VF** - [E1], [ET1]

**MXZ-2F53VFHZ** - [E1]

**MXZ-4F83VFHZ** - [E1]

**Indoor unit service manual**

**MSZ-LN•VG Series (OBH766)**   **MLZ-KP•VF Series (OBH801)**  
**MSZ-LN•VG2 Series (OBH766)**   **MFZ-KT•VG Series (OBH843)**  
**MSZ-EF•VG Series (OBH589)**   **SLZ-M•FA Series (OCH522)**  
**MSZ-AP•VF Series (OBH799)**   **SEZ-M•DA Series (HWE17040)**  
**MSZ-AP•VG Series (OBH788)**   **PCA-M•KA Series (OCH659)**  
**MSZ-BT•VG Series (OBH849)**   **PEAD-M•JA(L) Series (HWE16130)**



<b>MXZ-2F33VF</b>	<b>MXZ-2F33VF2</b>	<b>MXZ-2F33VF3</b>
<b>MXZ-2F42VF</b>	<b>MXZ-2F42VF2</b>	<b>MXZ-2F42VF3</b>
<b>MXZ-2F53VF</b>	<b>MXZ-2F53VF2</b>	<b>MXZ-2F53VF3</b>
<b>MXZ-2F53VFH</b>	<b>MXZ-2F53VFH2</b>	<b>MXZ-2F53VFH3</b>

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**PARTS CATALOG (OBB790)**

#### Revision A:

- **MXZ-3F54VF-** [E2], [ET2], **MXZ-3F68VF-** [E2], [ET2] and **MXZ-4F72VF-** [E2], [ET2] have been added.

#### Revision B:

- **MXZ-3F54VF2-** [E1], [ET1], **MXZ-3F68VF2-** [E1], [ET1], **MXZ-4F72VF2-** [E1], [ET1] and **MXZ-4F80VF2-** [E1], [ET1] have been added.

#### Revision C:

- **MXZ-2F33VF2-** [E1], [ET1], **MXZ-2F42VF2-** [E1], [ET1], **MXZ-2F53VF2-** [E1], [ET1] and **MXZ-2F53VFH2-** [E1] have been added.

#### Revision D:

- **MXZ-2F33VF3-** [E1], [ET1], **MXZ-2F42VF3-** [E1], [ET1], **MXZ-2F53VF3-** [E1], [ET1], **MXZ-2F53VFH3-** [E1], **MXZ-3F54VF3-** [E1], [ET1], **MXZ-3F68VF3-** [E1], [ET1], **MXZ-4F72VF3-** [E1], [ET1] and **MXZ-4F80VF3-** [E1], [ET1] have been added.

#### Revision E:

- **MXZ-4F83VF-** [E1], [ET1], **MXZ-5F102VF-** [E1], [ET1], **MXZ-6F122VF-** [E1], [ET1], **MXZ-2F53VFHZ-** [E1] and **MXZ-4F83VFHZ-** [E1] have been added.

#### Revision F:

- Chart of heating capacity and total input for **MXZ-4F83VFHZ-** [E1] have been corrected.
- Outdoor unit power supply for **MXZ-4F83VF-** [ET1] and **MXZ-5F102VF-** [ET1] have been corrected.

## 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 in the manuals and on the spec labels provided with our products.

We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

### **<Preparation before the repair service>**

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker and remove the power plug.
- Discharge the capacitor before the work involving the electric parts.

### **<Precautions during the repair service>**

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigeration cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.

# INDOOR / OUTDOOR UNIT COMPATIBILITY TABLE

**<MXZ-2F33VF>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
4way cassette	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F33VF2>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-BT**VG	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F33VF3>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									
	MSZ-BT**VG	●									
	MSZ-EF**VE3	●									
	MSZ-EF**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F42VF>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
4way cassette	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F42VF2>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-BT**VG	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F42VF3>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									
	MSZ-BT**VG	●									
	MSZ-EF**VE3	●									
	MSZ-EF**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F53VF / MXZ-2F53VFH>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
4way cassette	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F53VF2 / MXZ-2F53VFH2>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-EF**VE3	●									
	MSZ-BT**VG	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-2F53VF3 / MXZ-2F53VFH3>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									
	MSZ-BT**VG	●									
	MSZ-EF**VE3	●									
	MSZ-EF**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-3F54VF>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									*
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
1way cassette	MLZ-KP**VF										
4way cassette	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

\*1: Models with service sub number -E2/ET2 are connectable.

**<MXZ-3F54VF2>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-3F54VF3>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									
	MSZ-BT**VG	●									
	MSZ-EF**VE3	●									
	MSZ-EF**VG	●									
	MSZ-AP**VF	●									
1way cassette	MLZ-KP**VF										
Floor standing	MFZ-KT**VG										
	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

**<MXZ-3F68VF / MXZ-4F72VF>**

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
Wall mounted	MSZ-LN**VG	●									
	MSZ-LN**VG2	●									*
	MSZ-EF**VE3	●									
	MSZ-AP**VG	●									
1way cassette	MLZ-KP**VF										
4way cassette	SLZ-M**FA										
Ceiling concealed	PEAD-M**JA(L)										
	SEZ-M**DA(L)										
Ceiling suspended	PCA-M**KA										

\*1: Models with service sub number -E2/ET2 are connectable.

<MXZ-4F83VF / MXZ-5F102VF /  
MXZ-6F122VF / MXZ-4F83VFHZ>

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
		Wall mounted	MSZ-LN**VG2			●			●	●	
MSZ-BT**VG				●			●	●			
MSZ-EF**VG				●	●	●	●	●	●	●	
MSZ-AP**VG	●			●		●	●	●	●	●	●
1way cassette	MLZ-KP**VF					●	●		●		
Floor standing	MFZ-KT**VG					●	●		●		
4way cassette	SLZ-M**FA	●				●	●		●		
Floor standing	SFZ-M**VA					●	●		●	●	
Ceiling concealed	SEZ-M**DA(L)					●	●		●	●	

<MXZ-2F53VFHZ>

Connectable indoor unit lineups(Heat pump inverter type)		Capacity class [kW/h]									
Model type	Model name	15	18	20	22	25	35	42	50	60	71
		Wall mounted	MSZ-LN**VG2			●			●	●	
MSZ-BT**VG				●			●	●			
MSZ-EF**VG				●	●	●	●	●	●	●	
MSZ-AP**VG	●			●		●	●	●	●	●	
1way cassette	MLZ-KP**VF					●	●		●		
Floor standing	MFZ-KT**VG					●	●		●		
4way cassette	SLZ-M**FA	●				●	●		●		
Floor standing	SFZ-M**VA					●	●		●		
Ceiling concealed	SEZ-M**DA(L)					●	●		●		

**MXZ-2F33VF** -~~E1~~, ~~ET1~~

**MXZ-2F42VF** -~~E1~~, ~~ET1~~

**MXZ-2F53VF** -~~E1~~, ~~ET1~~

**MXZ-2F53VFH** -~~E1~~

**MXZ-3F54VF** -~~E1~~, ~~ET1~~

**MXZ-3F68VF** -~~E1~~, ~~ET1~~

**MXZ-4F72VF** -~~E1~~, ~~ET1~~

**MXZ-4F83VF** -~~E1~~, ~~ET1~~

**MXZ-5F102VF** -~~E1~~, ~~ET1~~

**MXZ-6F122VF** -~~E1~~, ~~ET1~~

**MXZ-2F53VFHZ** -~~E1~~

**MXZ-4F83VFHZ** -~~E1~~

1. New model

**MXZ-3F54VF** -~~E1~~, ~~ET1~~ → **MXZ-3F54VF** -~~E2~~, ~~ET2~~

**MXZ-3F68VF** -~~E1~~, ~~ET1~~ → **MXZ-3F68VF** -~~E2~~, ~~ET2~~

**MXZ-4F72VF** -~~E1~~, ~~ET1~~ → **MXZ-4F72VF** -~~E2~~, ~~ET2~~

1. LEV-R has been changed.

2. Outdoor control P. C. board has been changed.

**MXZ-3F54VF** -~~E2~~, ~~ET2~~ → **MXZ-3F54VF2** -~~E1~~, ~~ET1~~

**MXZ-3F68VF** -~~E2~~, ~~ET2~~ → **MXZ-3F68VF2** -~~E1~~, ~~ET1~~

**MXZ-4F72VF** -~~E2~~, ~~ET2~~ → **MXZ-4F72VF2** -~~E1~~, ~~ET1~~

1. Pre charged refrigerant amount and additional refrigerant amount have been changed.

2. Outdoor control P.C. board has been changed.

3. Power board has been changed.

4. LEV R has been changed.

**MXZ-4F80VF2** -~~E1~~, ~~ET1~~

1. New model

**MXZ-2F33VF** -~~E1~~, ~~ET1~~ → **MXZ-2F33VF2** -~~E1~~, ~~ET1~~

**MXZ-2F42VF** -~~E1~~, ~~ET1~~ → **MXZ-2F42VF2** -~~E1~~, ~~ET1~~

**MXZ-2F53VF** -~~E1~~, ~~ET1~~ → **MXZ-2F53VF2** -~~E1~~, ~~ET1~~

**MXZ-2F53VFH** -~~E1~~ → **MXZ-2F53VFH2** -~~E1~~, ~~ET1~~

1. Outdoor control P.C. board has been changed.

2. Outdoor fan motor has been changed.

**MXZ-2F33VF2** -~~E1~~, ~~ET1~~ → **MXZ-2F33VF3** -~~E1~~, ~~ET1~~

**MXZ-2F42VF2** -~~E1~~, ~~ET1~~ → **MXZ-2F42VF3** -~~E1~~, ~~ET1~~

**MXZ-2F53VF2** -~~E1~~, ~~ET1~~ → **MXZ-2F53VF3** -~~E1~~, ~~ET1~~

**MXZ-2F53VFH2** -~~E1~~ → **MXZ-2F53VFH3** -~~E1~~

**MXZ-3F54VF2** -~~E1~~, ~~ET1~~ → **MXZ-3F54VF3** -~~E1~~, ~~ET1~~

**MXZ-3F68VF2** -~~E1~~, ~~ET1~~ → **MXZ-3F68VF3** -~~E1~~, ~~ET1~~

**MXZ-4F72VF2** -~~E1~~, ~~ET1~~ → **MXZ-4F72VF3** -~~E1~~, ~~ET1~~

**MXZ-4F80VF2** -~~E1~~, ~~ET1~~ → **MXZ-4F80VF3** -~~E1~~, ~~ET1~~

## MEANINGS OF SYMBOLS DISPLAYED ON THE UNIT

	<b>WARNING</b> (Risk of fire)	This mark is for R32 refrigerant only. Refrigerant type is written on nameplate of outdoor unit. In case that refrigerant type is R32, this unit uses a flammable refrigerant. If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.
	Read the OPERATION 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 OPERATION 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

## Cautions for units utilizing refrigerant R32

**Preparation before the repair service.**

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker.
- Discharge the condenser before the work involving the electric parts.

**Use new refrigerant pipes.**

- In case of using the existing pipes for R22, be careful with the following.
- Be sure to clean the pipes and make sure that the insides of the pipes are clean.
  - Change flare nut to the one provided with this product.
  - Use a newly flared pipe.
  - Avoid using thin pipes.

**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 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.

**Precautions during the repair service.**

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigerating cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.
- When opening or closing the valve below freezing temperatures, refrigerant may spurt out from the valve gap, resulting in injuries.

**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.

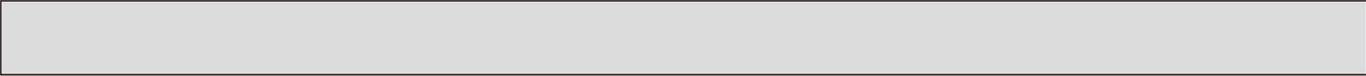
**Use the following tools specifically designed for use with R32 refrigerant.**

The following tools are necessary to use R32 refrigerant.

Tools for R32	
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.



**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.

**Do not use refrigerant other than R32.**

If other refrigerant (R22, etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil, etc.

**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 in the manuals and on the spec labels provided with our products.  
We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

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

## [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.  
For appliances not accessible to the general public.
- (4) Refrigerant pipes connection shall be accessible for maintenance purposes.
- (5) 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.
- (6) 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.
- (7) When installing or relocating, or servicing the air conditioner, use only the specified refrigerant (R32) 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.
- (8) 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.
- (9) Do not use low temperature solder alloy in case of brazing the refrigerant pipes.
- (10) 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.
- (11) 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.
- (12) Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- (13) 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).
- (14) Do not pierce or burn.
- (15) Be aware that refrigerants may not contain an odour.
- (16) Pipe-work shall be protected from physical damage.
- (17) The installation of pipe-work shall be kept to a minimum.
- (18) Compliance with national gas regulations shall be observed.
- (19) Keep any required ventilation openings clear of obstruction.
- (20) Servicing shall be performed only as recommended by the manufacturer.
- (21) The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
- (22) Maintenance, service and repair operations shall be performed by authorized technician with required qualification.
- (23) Be sure to have appropriate ventilation in order to prevent ignition. Furthermore, be sure to carry out fire prevention measures that there are no dangerous or flammable objects in the surrounding area.

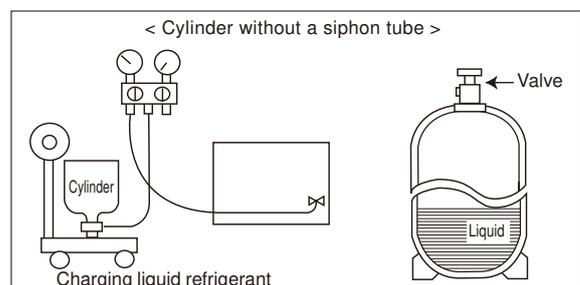
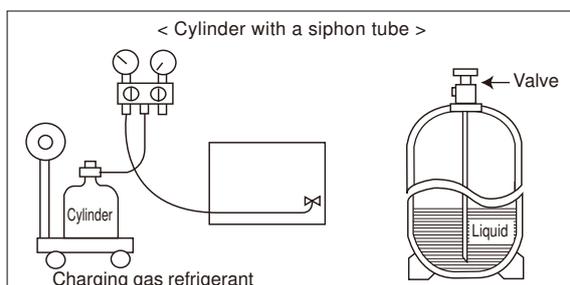
## [2] Cautions for service

- (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

R32 is a single refrigerant and its composition does not change. Therefore, both liquid charging and gas charging are possible. Liquid charging of refrigerant all at once from the low-pressure side may cause the compressor malfunction. Accordingly, make sure that charging is gradual.



## [4] Cautions for unit using R32 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 on 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 systems, (1-3) to (1-7) shall be completed prior to conducting work on the systems.

#### (1-2) Work Procedure

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor 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. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

#### (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. non-sparking, adequately sealed or intrinsically safe.

#### (1-5) Presence of Fire Extinguisher

If any hot work is to be conducted on the refrigeration 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 refrigeration 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 on the Refrigeration 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 charge size 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.
- Refrigeration 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 corroded.

#### (1-9) Checks on 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;
- no live electrical components and wiring are exposed while charging, recovering or purging the system;
- there is continuity of earth bonding

### (2) Repairs to Sealed Components

#### (2-1) During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.

#### (2-2) Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

Ensure that the apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres.

Replacement parts shall be in accordance with the manufacturer's specifications.

(3) Repair to intrinsically Safe Components

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

(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.

(6) Leak Detection Methods

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 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. For appliances containing flammable refrigerants, oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

(7) 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 is followed since flammability is a consideration. The following procedure shall be adhered to:

- remove refrigerant
- purge the circuit with inert gas
- evacuate
- purge again with inert gas
- open the circuit by cutting or brazing.

The refrigerant charge shall be recovered into the correct recovery cylinders. For appliances containing flammable refrigerants, the system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times.

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

For appliances containing flammable refrigerants, flushing shall be achieved by breaking the vacuum in the system with OFN 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 OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

Ensure that the outlet for the vacuum pump is not close to any ignition sources and that ventilation is available.

(8) 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 upright.
- Ensure that the refrigeration 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 refrigeration 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.

(9) 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 reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

- 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 manufacturer's 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 refrigeration system unless it has been cleaned and checked.

(10) 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.

(11) 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 are 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 shut-off 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 all appropriate refrigerants including, when applicable, flammable refrigerants. 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. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

The recovered refrigerant shall be returned to the refrigerant supplier 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 evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

## [5] Service tools

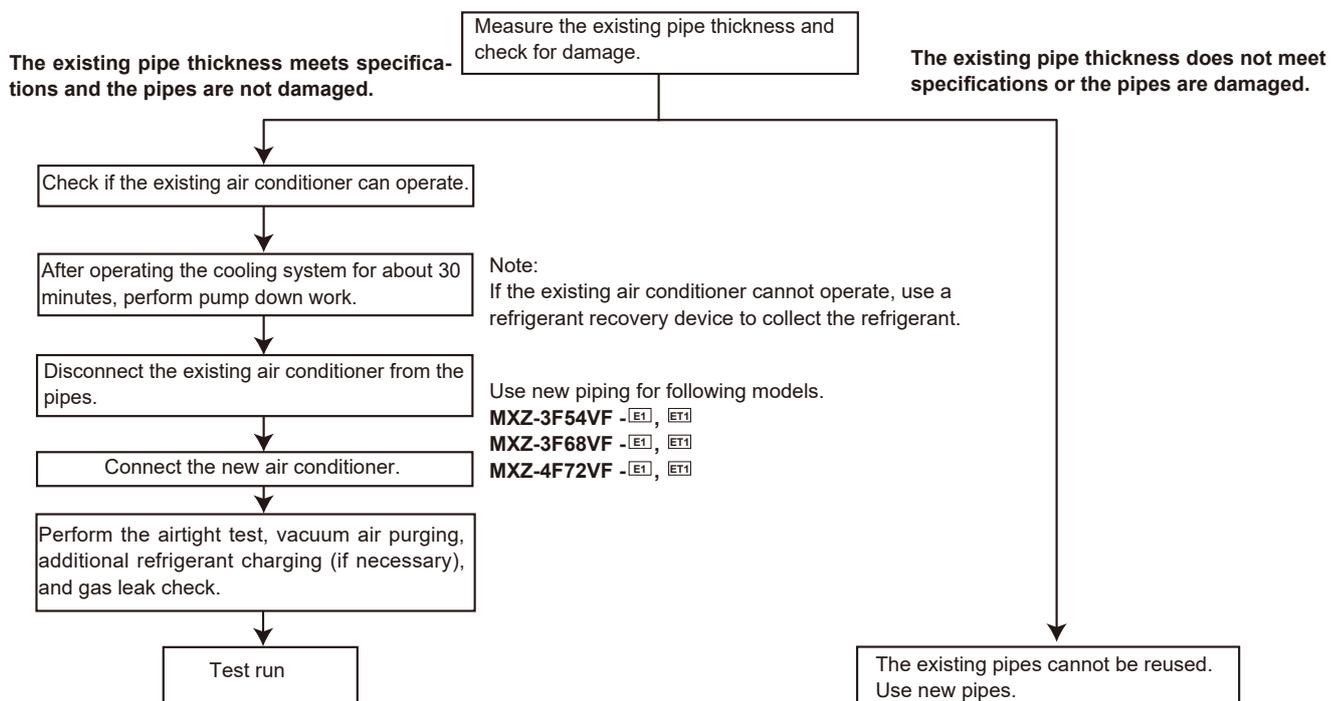
Use the below service tools as exclusive tools for R32 refrigerant.

No.	Tool name	Specifications
①	Gauge manifold	<ul style="list-style-type: none"> <li>· Only for R32</li> <li>· Use the existing fitting specifications. (UNF1/2)</li> <li>· Use high-tension side pressure of 5.3MPa·G or over.</li> </ul>
②	Charge hose	<ul style="list-style-type: none"> <li>· Only for R32</li> <li>· Use pressure performance of 5.09MPa·G or over.</li> </ul>
③	Electronic scale	—
④	Gas leak detector	· Use the detector for R134a, R407C, R410a or R32.
⑤	Adaptor for reverse flow check	· Attach on vacuum pump.
⑥	Refrigerant charge base	—
⑦	Refrigerant cylinder	<ul style="list-style-type: none"> <li>· Only for R32</li> <li>· Cylinder with syphon</li> </ul>
⑧	Refrigerant recovery equipment	—

## 2-3. PRECAUTIONS WHEN REUSING EXISTING R22/R410a REFRIGERANT PIPES

### (1) Flowchart

- Refer to the flowchart below to determine if the existing pipes can be used and if it is necessary to use a filter dryer.
- If the diameter of the existing pipes is different from the specified diameter, refer to technological data materials to confirm if the pipes can be used.



## (2) Cautions for refrigerant piping work

New refrigerant R32 is adopted for replacement inverter series. Although the refrigerant piping work for R32 is same as for R22, exclusive tools are necessary so as not to mix with different kind of refrigerant. Furthermore as the working pressure of R32 is 1.6 times higher than that of R22, their sizes of flared sections and flare nuts are different.

### ① Thickness of pipes

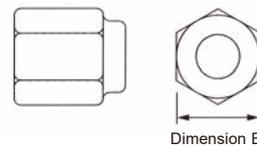
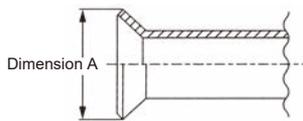
Because the working pressure of R32 is higher compared to R22, be sure to use refrigerant piping with thickness shown below. (Never use pipes of 0.7 mm or below.)

Diagram below: Piping diameter and thickness

Nominal dimensions(inch)	Outside diameter (mm)	Thickness (mm)	
		R32/R410a	R22
1/4	6.35	0.8	0.8
3/8	9.52	0.8	0.8
1/2	12.70	0.8	0.8
5/8	15.88	1.0	1.0
3/4	19.05	—	1.0

### ② Dimensions of flare cutting and flare nut

The component molecules in HFC refrigerant are smaller compared to conventional refrigerants. In addition to that, R32 is a refrigerant, which has higher risk of leakage because its working pressure is higher than that of other refrigerants. Therefore, to enhance airtightness and strength, flare cutting dimension of copper pipe for R32 has been specified separately from the dimensions for other refrigerants as shown below. The dimension B of flare nut for R32 also has partly been changed to increase strength as shown below. Set copper pipe correctly referring to copper pipe flaring dimensions for R32 below. For 1/2 and 5/8 inch pipes, the dimension B changes. Use torque wrench corresponding to each dimension.



Flare cutting dimensions

Nominal dimensions(inch)	Outside diameter(mm)	Dimension A (+0.0/-0.4) (mm)	
		R32/R410a	R22
1/4	6.35	9.1	9.0
3/8	9.52	13.2	13.0
1/2	12.70	16.6	16.2
5/8	15.88	19.7	19.4
3/4	19.05	—	23.3

Flare nut dimensions

Nominal dimensions(inch)	Outside diameter(mm)	Dimension B (mm)	
		R32/R410a	R22
1/4	6.35	17.0	17.0
3/8	9.52	22.0	22.0
1/2	12.70	26.0	24.0
5/8	15.88	29.0 *	27.0
3/4	19.05	—	36.0

\* 36.0mm for indoor unit of RP100, 125 and 140

### ③ Tools for R32 (The following table shows whether conventional tools can be used or not.)

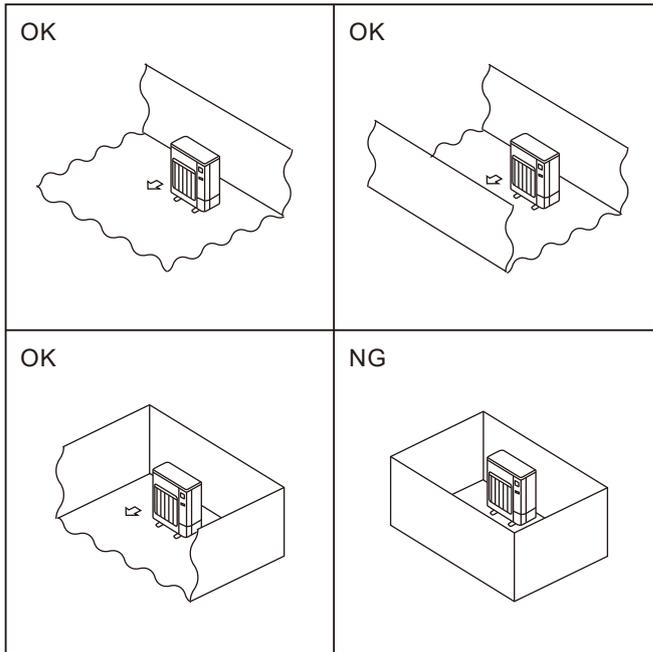
Tools and materials	Use	R32 tools	Can R22 tools be used?	Can R407C tools be used?	Can R410a tools be used?
Gauge manifold	Air purge, refrigerant charge and operation check	Tool exclusive for R32	×	×	○
Charge hose		Tool exclusive for R32	×	×	○
Gas leak detector	Gas leak check	Tool for HFC refrigerant	×	○	○
Refrigerant recovery equipment	Refrigerant recovery	Tool exclusive for R32	×	×	○
Refrigerant cylinder	Refrigerant charge	Tool exclusive for R32	×	×	×
Safety charger	Prevent compressor malfunction when charging refrigerant by spraying liquid refrigerant	Tool exclusive for R32	×	×	○
Charge valve	Prevent gas from blowing out when detaching charge hose	Tool exclusive for R32	×	×	○
Vacuum pump	Vacuum drying and air purge	Tools for other refrigerants can be used if equipped with adapter for reverse flow check	△(Usable if equipped with adapter for reverse flow)	△(Usable if equipped with adapter for reverse flow)	△(Usable if equipped with adapter for reverse flow)
Flare tool	Flaring work of piping	Tools for other refrigerants can be used by adjusting flaring dimension	△(Usable by adjusting flaring dimension)	△(Usable by adjusting flaring dimension)	△(Usable by adjusting flaring dimension)
Bender	Bend the pipes	Tools for other refrigerants can be used	○	○	○
Pipe cutter	Cut the pipes	Tools for other refrigerants can be used	○	○	○
Welder and nitrogen gas cylinder	Weld the pipes	Tools for other refrigerants can be used	○	○	○
Refrigerant charging scale	Refrigerant charge	Tools for other refrigerants can be used	○	○	○
Vacuum gauge or thermistor vacuum gauge and vacuum valve	Check the degree of vacuum. (Vacuum valve prevents back flow of oil and refrigerant to thermistor vacuum gauge)	Tools for other refrigerants can be used	○	○	○
Charging cylinder	Refrigerant charge	Tool exclusive for R32	×	—	×

× : Prepare a new tool. (Use the new tool as the tool exclusive for R32.)

△ : Tools for other refrigerants can be used under certain conditions.

○ : Tools for other refrigerants can be used.

## 2-4. CHOOSING THE OUTDOOR UNIT INSTALLATION LOCATION



R32 is heavier than air—as well as other refrigerants—so tends to accumulate at the base (in the vicinity of the floor). If R32 accumulates around base, it may reach a flammable concentration in case room is small. To avoid ignition, maintaining a safe work environment is required by ensuring appropriate ventilation. If a refrigerant leak is confirmed in a room or an area where there is insufficient ventilation, refrain from using of flames until the work environment can be improved by ensuring appropriate ventilation.

Install outdoor unit in a place where at least one of the four sides is open, and in a sufficiently large space without depressions.

## 2-5. MINIMUM INSTALLATION AREA

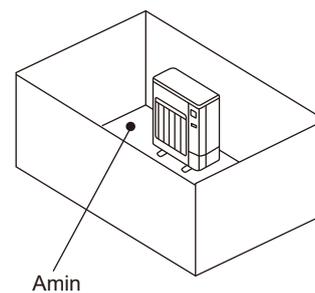
If you unavoidably install a unit in a space where all four sides are blocked or there are depressions, confirm that one of these situations (A, B or C) is satisfied.

Note: These countermeasures are for keeping safety not for specification guarantee.

A) Secure sufficient installation space (minimum installation area  $A_{min}$ ).

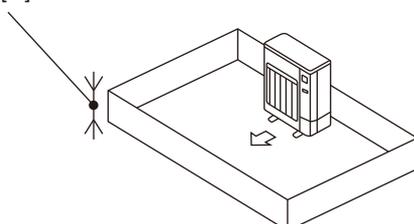
Install in a space with an installation area of  $A_{min}$  or more, corresponding to refrigerant quantity M (factory-charged refrigerant + locally added refrigerant).

M [kg]	$A_{min}$ [m <sup>2</sup> ]
1.0	12
1.5	17
2.0	23
2.5	28
3.0	34
3.5	39
4.0	45
4.5	50
5.0	56
5.5	62
6.0	67
6.5	73
7.0	78
7.5	84

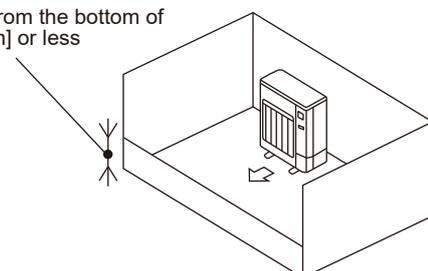


B) Install in a space with a depression height of 0.125 [m] or less.

Height from the bottom of  
0.125 [m] or less



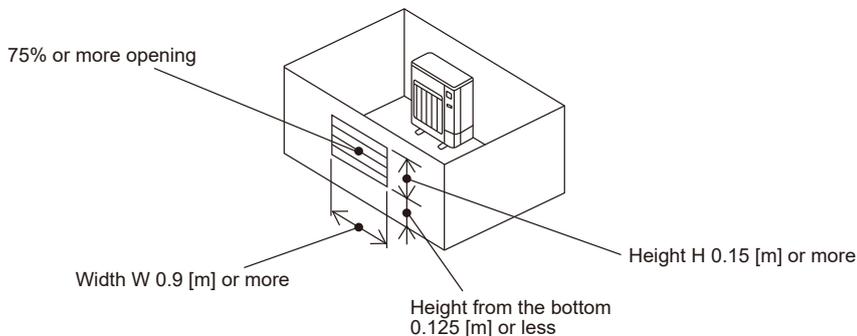
Height from the bottom of  
0.125 [m] or less



C) Create an appropriate ventilation open area.

Make sure that the width of the open area is 0.9 [m] or more and the height of the open area is 0.15 [m] or more. However, the height from the bottom of the installation space to the bottom edge of the open area should be 0.125 [m] or less.

Open area should be 75% or more opening.



■ Indoor units

Install in a room with a floor area of A min or more, corresponding to refrigerant quantity M (factory-charged refrigerant + locally added refrigerant).

\* For the factory-charged refrigerant amount, refer to the spec nameplate or installation manual.

For the amount to be added locally, refer to the installation manual.

Install the indoor unit so that the height from the floor to the bottom of the indoor unit is h0;

for wall mounted: 1.8 m or more;

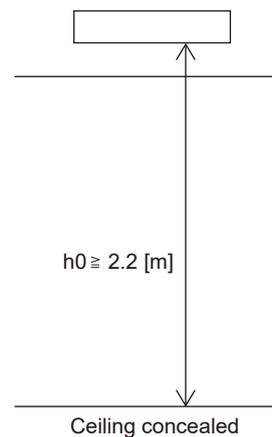
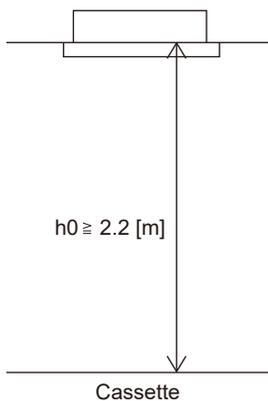
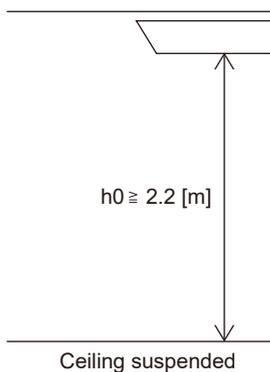
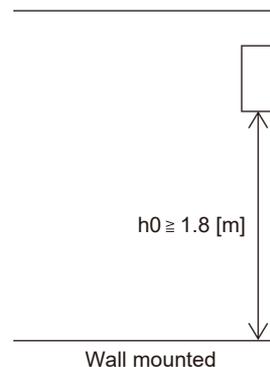
for ceiling suspended, cassette and ceiling concealed: 2.2 m or more.

When installing floor standing, refer to indoor unit Installation manual.

There are restrictions in installation height for each model, so read the installation manual for the particular unit.

Case 1: for wall mounted, ceiling suspended, cassette and concealed

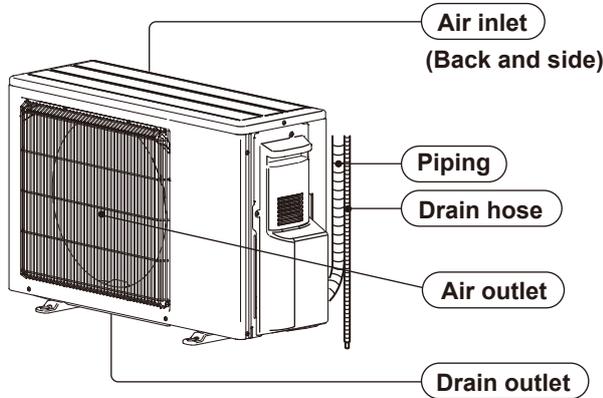
M [kg]	Amin [m <sup>2</sup> ]
1.0	3
1.5	4.5
2.0	6
2.5	7.5
3.0	9
3.5	12
4.0	15.5
4.5	20
5.0	24
5.5	29
6.0	35
6.5	41
7.0	47
7.5	54



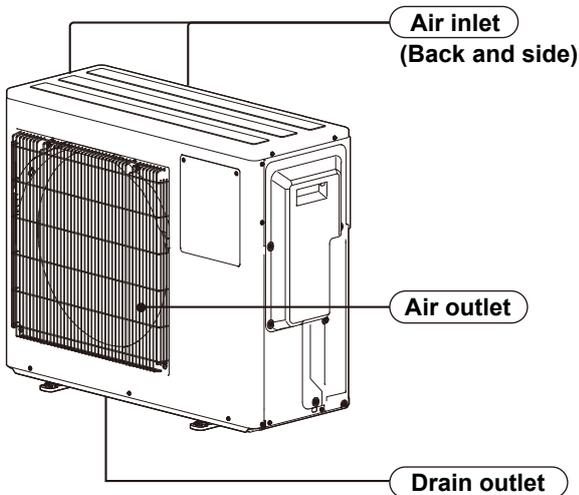
### 3

## PART NAMES AND FUNCTIONS

MXZ-2F33VF    MXZ-2F33VF2    MXZ-2F33VF3  
 MXZ-2F42VF    MXZ-2F42VF2    MXZ-2F42VF3  
 MXZ-2F53VF    MXZ-2F53VF2    MXZ-2F53VF3  
 MXZ-2F53VFH    MXZ-2F53VFH2    MXZ-2F53VFH3



MXZ-3F54VF    MXZ-3F54VF2    MXZ-3F54VF3  
 MXZ-3F68VF    MXZ-3F68VF2    MXZ-3F68VF3  
 MXZ-4F72VF    MXZ-4F72VF2    MXZ-4F72VF3  
                   MXZ-4F80VF2    MXZ-4F80VF3

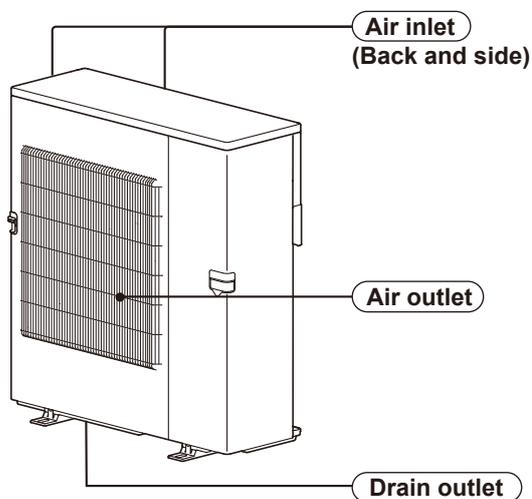
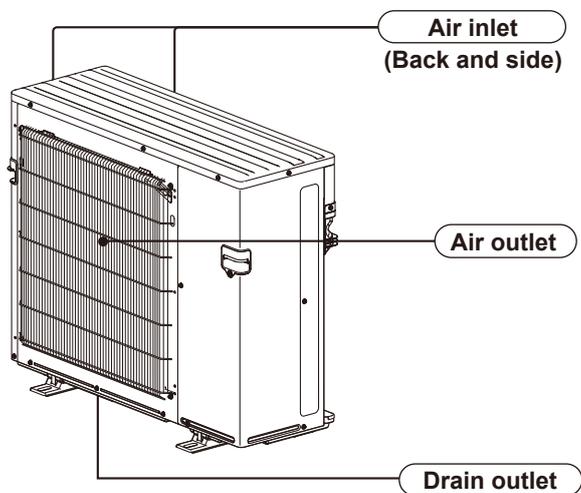


### ACCESSORIES

Model	MXZ-2F33VF	MXZ-2F33VF2	MXZ-2F33VF3	MXZ-3F54VF	MXZ-3F54VF2	MXZ-3F54VF3
		MXZ-2F42VF	MXZ-2F42VF2	MXZ-2F42VF3	MXZ-3F68VF	MXZ-3F68VF2
	MXZ-2F53VF	MXZ-2F53VF2	MXZ-2F53VF3	MXZ-4F72VF	MXZ-4F72VF2	MXZ-4F72VF3
					MXZ-4F80VF2	MXZ-4F80VF3
① Drain socket		1			1	
② Drain cap		-			2	

MXZ-4F83VF  
 MXZ-5F102VF  
 MXZ-2F53VFHZ

MXZ-4F83VFHZ  
 MXZ-6F122VF



**ACCESSORIES**

Model	MXZ-4F83VF	MXZ-5F102VF	MXZ-6F122VF
① Drain socket		1	
② Drain cap		5	

## 4

## SPECIFICATION

Outdoor model			<b>MXZ-2F33VF</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 20	
	Connecting pipe length	m	Max. 15	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	3.3 (1.1 - 3.8)	4.0 (1.0 - 4.1)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	850	910
	Running current (Total) *1, *2	A	4.3 - 4.1 - 3.9	4.6 - 4.4 - 4.2
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	4.6	
Coefficient of performance (C.O.P) (Total) *1, *2			3.88	4.40
Compressor	Model		KVB073FYXMC	
	Output	W	470	
	Current *1, *2	A	3.8	
	Refrigeration oil (Model)	L	0.27 (FW68S)	
Fan motor	Model		RC0J50-FA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	33	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,890	1,938
	Sound level (Rated)	dB(A)	49	50
	Fan speed (Rated)	rpm	860	880
	Pre-charged refrigerant quantity (R32)	kg	1.0	
	Max refrigerant quantity (R32)	kg	1.0	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-AP15VF + MSZ-LN18VG**

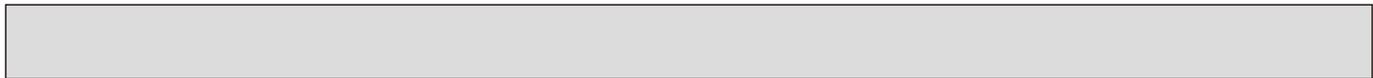
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-2F33VF2</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 20	
	Connecting pipe length	m	Max. 15	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	3.3 (1.1 - 3.8)	4.0 (1.0 - 4.1)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	850	910
	Running current (Total) *1, *2	A	4.3 - 4.1 - 3.9	4.6 - 4.4 - 4.2
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	4.6	
Coefficient of performance (C.O.P) (Total) *1, *2			3.88	4.40
Compressor	Model		KVB073FYXMC	
	Output	W	470	
	Current *1, *2	A	3.8	
	Refrigeration oil (Model)	L	0.27 (FW68S)	
Fan motor	Model		RC0J50-NA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	33	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,890	1,938
	Sound level (Rated)	dB(A)	49	50
	Fan speed (Rated)	rpm	860	880
	Pre-charged refrigerant quantity (R32)	kg	1.0	
	Max refrigerant quantity (R32)	kg	1.0	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-AP15VG + MSZ-LN18VG**

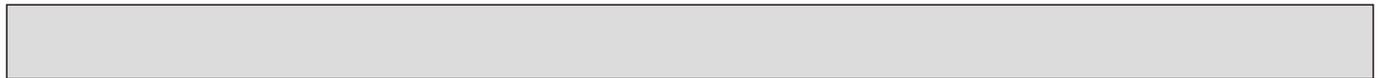
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-2F33VF3</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 20	
	Connecting pipe length	m	Max. 15	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	3.3 (1.1 - 3.8)	4.0 (1.0 - 4.1)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	850	910
	Running current (Total) *1, *2	A	4.3 - 4.1 - 3.9	4.6 - 4.4 - 4.2
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	4.6	
Coefficient of performance (C.O.P) (Total) *1, *2			3.88	4.40
Compressor	Model		KVB073FYXMC	
	Output	W	470	
	Current *1, *2	A	3.8	
	Refrigeration oil (Model)	L	0.27 (FW68S)	
Fan motor	Model		RC0J50-NA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	33	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,890	1,938
	Sound level (Rated)	dB(A)	49	50
	Fan speed (Rated)	rpm	860	880
	Pre-charged refrigerant quantity (R32)	kg	0.8	
	Max refrigerant quantity (R32)	kg	0.8	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-AP15VG + MSZ-LN18VG2**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-2F42VF</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	4.2 (1.1 - 4.4)	4.5 (1.0 - 4.8)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	980	880
	Running current (Total) *1, *2	A	4.9 - 4.7 - 4.5	4.4 - 4.3 - 4.1
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	7.6	
Coefficient of performance (C.O.P) (Total) *1, *2			4.29	5.11
Compressor	Model		SVB130FBBMT	
	Output	W	1,100	
	Current *1, *2	A	3.99	
	Refrigeration oil (Model)	L	0.35 (FW68S)	
Fan motor	Model		RC0J50-FA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	37	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,704	2,010
	Sound level (Rated)	dB(A)	44	50
	Fan speed (Rated)	rpm	780	910
	Pre-charged refrigerant quantity (R32)	kg	1.2	
	Max refrigerant quantity (R32)	kg	1.2	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN25VG**

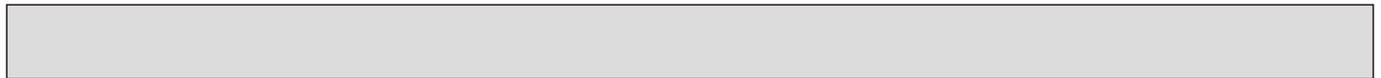
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-2F42VF2</b>		
Outdoor unit power supply		Single phase 220 - 230 - 240 V, 50 Hz		
System	Indoor units number	2		
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function		Cooling	Heating	
Capacity Rated (Min.-Max.) *2	kW	4.2 (1.1 - 4.4)	4.5 (1.0 - 4.8)	
Breaker capacity	A	15		
Electrical data	Power input (Total) *1, *2	W	980	880
	Running current (Total) *1, *2	A	4.9 - 4.7 - 4.5	4.4 - 4.3 - 4.1
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	7.6	
Coefficient of performance (C.O.P) (Total) *1, *2			4.29	5.11
Compressor	Model	SVB130FBBMT		
	Output	W	1,100	
	Current *1, *2	A	3.99	
	Refrigeration oil (Model)	L	0.35 (FW68S)	
Fan motor	Model	RC0J50-NA		
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	37	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,704	2,010
	Sound level (Rated)	dB(A)	44	50
	Fan speed (Rated)	rpm	780	910
	Pre-charged refrigerant quantity (R32)	kg	1.2	
	Max refrigerant quantity (R32)	kg	1.2	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN25VG**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-2F42VF3</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	4.2 (1.1 - 4.4)	4.5 (1.0 - 4.8)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	980	880
	Running current (Total) *1, *2	A	4.9 - 4.7 - 4.5	4.4 - 4.3 - 4.1
	Power factor (Total) *1, *2	%	90	
	Starting current (Total) *1, *2	A	7.6	
Coefficient of performance (C.O.P) (Total) *1, *2			4.29	5.11
Compressor	Model		SVB130FBBMT	
	Output	W	1,100	
	Current *1, *2	A	3.99	
	Refrigeration oil (Model)	L	0.35 (FW68S)	
Fan motor	Model		RC0J50-NA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	37	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,704	2,010
	Sound level (Rated)	dB(A)	44	50
	Fan speed (Rated)	rpm	780	910
	Pre-charged refrigerant quantity (R32)	kg	1.0	
	Max refrigerant quantity (R32)	kg	1.0	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN25VG2**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C





Outdoor model			<b>MXZ-2F53VF2 MXZ-2F53VFH2</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2	
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	5.3 (1.1 - 5.6)	6.4 (1.0 - 7.0)
Breaker capacity		A	15	
Electrical data	Power input (Total) *1, *2	W	1,400	1,560
	Running current (Total) *1, *2	A	6.5 - 6.2 - 6.0	7.5 - 7.1 - 6.8
	Power factor (Total) *1, *2	%	97.5	95
	Starting current (Total) *1, *2	A	7.6	
Coefficient of performance (C.O.P) (Total) *1, *2			3.79	4.10
Compressor	Model		SVB130FBBMT	
	Output	W	1,400	
	Current *1, *2	A	6.59	
	Refrigeration oil (Model)	L	0.35 (FW68S)	
Fan motor	Model		RC0J50-NA	
	Current *1, *2	A	0.35	
Dimensions W x H x D		mm	800 x 550 x 285	
Weight		kg	<b>MXZ-2F53VF2: 37 MXZ-2F53VFH2: 38</b>	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,962	2,082
	Sound level (Rated)	dB(A)	46	51
	Fan speed (Rated)	rpm	890	940
	Pre-charged refrigerant quantity (R32)	kg	1.2	
	Max refrigerant quantity (R32)	kg	1.2	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN35VG**

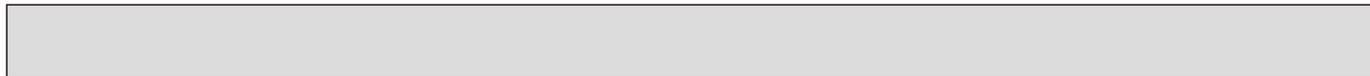
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-2F53VF3 MXZ-2F53VFH3</b>		
Outdoor unit power supply		Single phase 220 - 230 - 240 V, 50 Hz		
System	Indoor units number	2		
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function		Cooling	Heating	
Capacity Rated (Min.-Max.) *2	kW	5.3 (1.1 - 5.6)	6.4 (1.0 - 7.0)	
Breaker capacity	A	15		
Electrical data	Power input (Total) *1, *2	W	1,400	1,560
	Running current (Total) *1, *2	A	6.5 - 6.2 - 6.0	7.5 - 7.1 - 6.8
	Power factor (Total) *1, *2	%	97.5	95
	Starting current (Total) *1, *2	A	7.6	
Coefficient of performance (C.O.P) (Total) *1, *2			3.79	4.10
Compressor	Model	SVB130FBBMT		
	Output	W	1,400	
	Current *1, *2	A	6.59	
	Refrigeration oil (Model)	L	0.35 (FW68S)	
Fan motor	Model	RC0J50-NA		
	Current *1, *2	A	0.35	
Dimensions W x H x D	mm	800 x 550 x 285		
Weight	kg	<b>MXZ-2F53VF3: 37 MXZ-2F53VFH3: 38</b>		
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,962	2,082
	Sound level (Rated)	dB(A)	46	51
	Fan speed (Rated)	rpm	890	940
	Pre-charged refrigerant quantity (R32)	kg	1.0	
	Max refrigerant quantity (R32)	kg	1.0	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN35VG2**

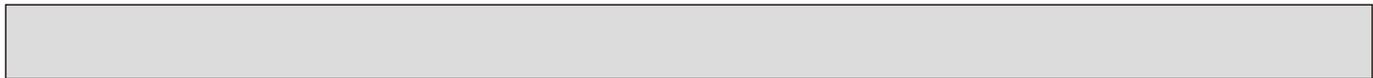
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-3F54VF</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 3	
	Piping total length	m	Max. 50	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	5.4 (2.9 - 6.8)	7.0 (2.6 - 9.0)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	1,320	1,400
	Running current (Total) *1, *2	A	6.0 - 5.7 - 5.5	6.4 - 6.1 - 5.9
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	6.7	
Coefficient of performance (C.O.P) (Total) *1, *2			4.09	5.00
Compressor	Model		SVB130FBBM1T	
	Output	W	1,400	
	Current *1, *2	A	5.06	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	57	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,860	1,632
	Sound level (Rated)	dB(A)	46	50
	Fan speed (Rated)	rpm	600	560
	Pre-charged refrigerant quantity (R32)	kg	1.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG**

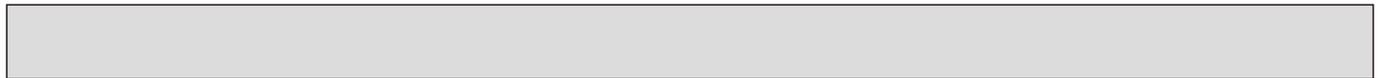
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-3F54VF2</b>	
Outdoor unit power supply		Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number	2 to 3	
	Piping total length	m	Max. 50
	Connecting pipe length	m	Max. 25
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
Function		Cooling	Heating
Capacity Rated (Min.-Max.) *2	kW	5.4 (2.9 - 6.8)	7.0 (2.6 - 9.0)
Breaker capacity		A 25	
Electrical data	Power input (Total) *1, *2	W	1,320
	Running current (Total) *1, *2	A	6.0 - 5.7 - 5.5
	Power factor (Total) *1, *2	%	99
	Starting current (Total) *1, *2	A	6.7
Coefficient of performance (C.O.P) (Total) *1, *2		4.09	5.00
Compressor	Model	SVB130FBBM1T	
	Output	W	1,400
	Current *1, *2	A	5.06
	Refrigeration oil (Model)	L	0.6 (FW68S)
Fan motor	Model	SIC-82FX-F764-1	
	Current *1, *2	A	0.5
Dimensions W x H x D		mm 840 x 710 x 330	
Weight		kg 58	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,860
	Sound level (Rated)	dB(A)	46
	Fan speed (Rated)	rpm	600
	Pre-charged refrigerant quantity (R32)	kg	2.4
	Max refrigerant quantity (R32)	kg	2.4

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG**

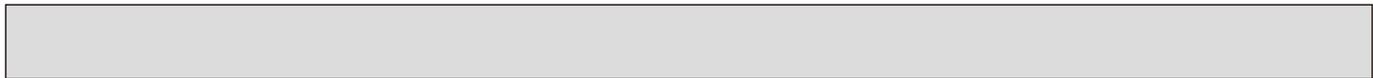
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-3F54VF3</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 3	
	Piping total length	m	Max. 50	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	5.4 (2.9 - 6.8)	7.0 (2.6 - 9.0)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	1,320	1,400
	Running current (Total) *1, *2	A	6.0 - 5.7 - 5.5	6.4 - 6.1 - 5.9
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	6.7	
Coefficient of performance (C.O.P) (Total) *1, *2			4.09	5.00
Compressor	Model		SVB130FBBM1T	
	Output	W	1,400	
	Current *1, *2	A	5.06	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	58	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	1,860	1,860
	Sound level (Rated)	dB(A)	46	50
	Fan speed (Rated)	rpm	600	600
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2**

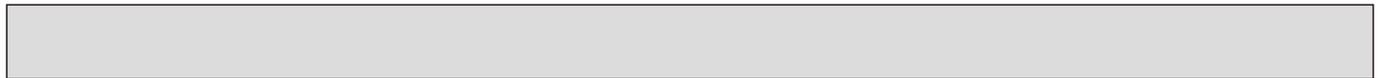
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-3F68VF</b>		
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz		
System	Indoor units number		2 to 3		
	Piping total length	m	Max. 60		
	Connecting pipe length	m	Max. 25		
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.		
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.		
Function			Cooling	Heating	
Capacity Rated (Min.-Max.) *2		kW	6.8 (2.9 - 8.4)	8.6 (2.6 - 10.6)	
Breaker capacity		A	25		
Electrical data	Power input (Total) *1, *2		W	1,840	1,910
	Running current (Total) *1, *2		A	8.4 - 8.0 - 7.7	8.8 - 8.4 - 8.0
	Power factor (Total) *1, *2		%	99	
	Starting current (Total) *1, *2		A	10.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.70	4.50	
Compressor	Model		SVB172FCKM1T		
	Output	W	1,800		
	Current *1, *2	A	8.58		
	Refrigeration oil (Model)	L	0.6 (FW68S)		
Fan motor	Model		SIC-82FX-F764-1		
	Current *1, *2	A	0.5		
Dimensions W x H x D		mm	840 x 710 x 330		
Weight		kg	57		
Special remarks	Air flow (Rated)		m <sup>3</sup> /h	2,124	2,376
	Sound level (Rated)		dB(A)	48	53
	Fan speed (Rated)		rpm	650	700
	Pre-charged refrigerant quantity (R32)		kg	1.4	
	Max refrigerant quantity (R32)		kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN25VG + MSZ-LN25VG**

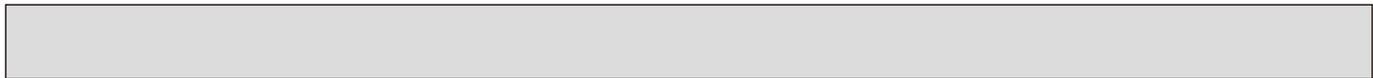
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-3F68VF2</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 3	
	Piping total length	m	Max. 60	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	6.8 (2.9 - 8.4)	8.6 (2.6 - 10.6)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	1,840	1,910
	Running current (Total) *1, *2	A	8.4 - 8.0 - 7.7	8.8 - 8.4 - 8.0
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	10.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.70	4.50
Compressor	Model		SVB172FCKM1T	
	Output	W	1,800	
	Current *1, *2	A	8.58	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	58	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,124	2,376
	Sound level (Rated)	dB(A)	48	53
	Fan speed (Rated)	rpm	650	700
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN25VG + MSZ-LN25VG**

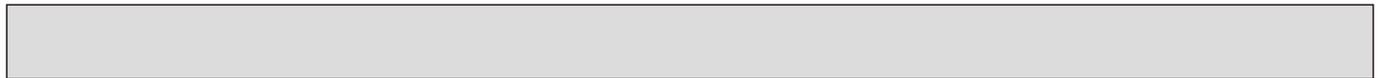
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-3F68VF3</b>	
Outdoor unit power supply		Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number	2 to 3	
	Piping total length	m	Max. 60
	Connecting pipe length	m	Max. 25
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
Function		Cooling	Heating
Capacity Rated (Min.-Max.) *2	kW	6.8 (2.9 - 8.4)	8.6 (2.6 - 10.6)
Breaker capacity		A 25	
Electrical data	Power input (Total) *1, *2	W	1,840
	Running current (Total) *1, *2	A	8.4 - 8.0 - 7.7
	Power factor (Total) *1, *2	%	99
	Starting current (Total) *1, *2	A	10.1
Coefficient of performance (C.O.P) (Total) *1, *2		3.70	4.50
Compressor	Model	SVB172FCKM1T	
	Output	W	1,800
	Current *1, *2	A	8.58
	Refrigeration oil (Model)	L	0.6 (FW68S)
Fan motor	Model	SIC-82FX-F764-1	
	Current *1, *2	A	0.5
Dimensions W x H x D		mm 840 x 710 x 330	
Weight		kg 58	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,124
	Sound level (Rated)	dB(A)	48
	Fan speed (Rated)	rpm	650
	Pre-charged refrigerant quantity (R32)	kg	2.4
	Max refrigerant quantity (R32)	kg	2.4

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN25VG2 + MSZ-LN25VG2**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-4F72VF</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 4	
	Piping total length	m	Max. 60	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	7.2 (3.7 - 8.8)	8.6 (3.4 - 10.7)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	1,850	1,870
	Running current (Total) *1, *2	A	8.5 - 8.1 - 7.8	8.6 - 8.2 - 7.9
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	10.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.89	4.60
Compressor	Model		SVB172FCKM1T	
	Output	W	2,000	
	Current *1, *2	A	6.98	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	58	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,124	2,562
	Sound level (Rated)	dB(A)	48	54
	Fan speed (Rated)	rpm	650	740
	Pre-charged refrigerant quantity (R32)	kg	1.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG**

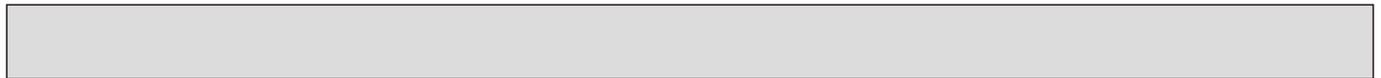
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-4F72VF2</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 4	
	Piping total length	m	Max. 60	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	7.2 (3.7 - 8.8)	8.6 (3.4 - 10.7)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2		W	1,850
	Running current (Total) *1, *2		A	8.5 - 8.1 - 7.8
	Power factor (Total) *1, *2		%	99
	Starting current (Total) *1, *2		A	10.1
Coefficient of performance (C.O.P) (Total) *1, *2			3.89	4.60
Compressor	Model		SVB172FCKM1T	
	Output	W	2,000	
	Current *1, *2	A	6.98	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	59	
Special remarks	Air flow (Rated)		m <sup>3</sup> /h	2,124
	Sound level (Rated)		dB(A)	48
	Fan speed (Rated)		rpm	650
	Pre-charged refrigerant quantity (R32)		kg	2.4
	Max refrigerant quantity (R32)		kg	2.4

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-4F72VF3</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 4	
	Piping total length	m	Max. 60	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	7.2 (3.7 - 8.8)	8.6 (3.4 - 10.7)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	1,850	1,870
	Running current (Total) *1, *2	A	8.5 - 8.1 - 7.8	8.6 - 8.2 - 7.9
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	10.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.89	4.60
Compressor	Model		SVB172FCKM1T	
	Output	W	2,000	
	Current *1, *2	A	6.98	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	59	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,124	2,562
	Sound level (Rated)	dB(A)	48	54
	Fan speed (Rated)	rpm	650	740
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2**

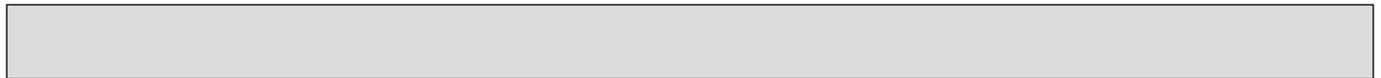
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-4F80VF2</b>	
Outdoor unit power supply		Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number	2 to 4	
	Piping total length	m	Max. 60
	Connecting pipe length	m	Max. 25
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.
Function		Cooling	Heating
Capacity Rated (Min.-Max.) *2	kW	8.0 (3.7 - 9.0)	8.8 (3.4 - 11.0)
Breaker capacity		A	25
Electrical data	Power input (Total) *1, *2	W	2,250
	Running current (Total) *1, *2	A	10.3 - 9.9 - 9.5
	Power factor (Total) *1, *2	%	99
	Starting current (Total) *1, *2	A	10.1
Coefficient of performance (C.O.P) (Total) *1, *2		3.56	4.40
Compressor	Model	SVB172FCKM1T	
	Output	W	2,000
	Current *1, *2	A	6.98
	Refrigeration oil (Model)	L	0.6 (FW68S)
Fan motor	Model	SIC-82FX-F764-1	
	Current *1, *2	A	0.5
Dimensions W x H x D		mm	840 x 710 x 330
Weight		kg	59
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,418
	Sound level (Rated)	dB(A)	50
	Fan speed (Rated)	rpm	710
	Pre-charged refrigerant quantity (R32)	kg	2.4
	Max refrigerant quantity (R32)	kg	2.4

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG + MSZ-LN18VG + MSZ-LN18VG + MSZ-LN25VG**

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-4F80VF3</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240 V, 50 Hz	
System	Indoor units number		2 to 4	
	Piping total length	m	Max. 60	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	8.0 (3.7 - 9.0)	8.8 (3.4 - 11.0)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	2,250	2,000
	Running current (Total) *1, *2	A	10.3 - 9.9 - 9.5	9.2 - 8.8 - 8.4
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	10.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.56	4.40
Compressor	Model		SVB172FCKM1T	
	Output	W	2,000	
	Current *1, *2	A	6.98	
	Refrigeration oil (Model)	L	0.6 (FW68S)	
Fan motor	Model		SIC-82FX-F764-1	
	Current *1, *2	A	0.5	
Dimensions W x H x D		mm	840 x 710 x 330	
Weight		kg	59	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,418	2,646
	Sound level (Rated)	dB(A)	50	55
	Fan speed (Rated)	rpm	710	760
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN25VG2**

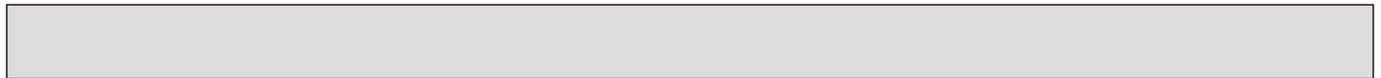
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model		<b>MXZ-4F83VF</b>		
Outdoor unit power supply		Single phase 220 -230 - 240 V, 50 Hz *3		
System	Indoor units number	1 to 4 *4		
	Piping total length	m	Max. 70	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function		Cooling	Heating	
Capacity Rated (Min.-Max.) *2	kW	8.3 (3.7 - 9.2)	9.3 (3.4 - 11.6)	
Breaker capacity	A	25		
Electrical data	Power input (Total) *1, *2	W	1,970	2,000
	Running current (Total) *1, *2	A	9.1 - 8.7 - 8.3	9.2 - 8.8 - 8.4
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	8.8	
Coefficient of performance (C.O.P) (Total) *1, *2		4.21	4.65	
Compressor	Model	SVB220FUGMC-L1		
	Output	W	2,200	
	Current *1, *2	A	7.4	7.5
	Refrigeration oil (Model)	L	0.6 (FW68CA)	
Fan motor	Model	SIC-88FWJ-D888-4		
	Current *1, *2	A	0.3	
Dimensions W x H x D		mm	950 x 796 x 330	
Weight		kg	62	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	3,420	3,720
	Sound level (Rated)	dB(A)	49	51
	Fan speed (Rated)	rpm	600	640
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with below indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN25VG2 + MSZ-LN25VG2**

\*3 220 and 240 V are only -[E1].

\*4 At least 2 indoor units must be connected when using indoor unit with capacity lower than 25 class.

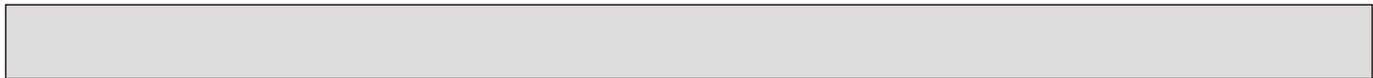
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0°C Wet-bulb temperature 19.0°C

OUTDOOR Dry-bulb temperature 35.0°C Wet-bulb temperature 24.0°C

HEATING INDOOR Dry-bulb temperature 20.0°C

OUTDOOR Dry-bulb temperature 7.0°C Wet-bulb temperature 6.0°C



Outdoor model			<b>MXZ-5F102VF</b>	
Outdoor unit power supply			Single phase 220 -230 - 240 V, 50 Hz *3	
System	Indoor units number		1 to 5 *4	
	Piping total length	m	Max. 80	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	10.2 (3.9 - 11.0)	10.5 (4.1 - 14.0)
Breaker capacity		A	25	
Electrical data	Power input (Total) *1, *2	W	2,800	2,280
	Running current (Total) *1, *2	A	12.9 - 12.3 - 11.8	10.5 - 10.0 - 9.6
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	12.3	
Coefficient of performance (C.O.P) (Total) *1, *2			3.64	4.60
Compressor	Model		SVB220FUGMC-L1	
	Output	W	2,800	
	Current *1, *2	A	10.7	8.4
	Refrigeration oil (Model)	L	0.6 (FW68CA)	
Fan motor	Model		SIC-88FWJ-D888-4	
	Current *1, *2	A	0.3	
Dimensions W x H x D		mm	950 x 796 x 330	
Weight		kg	62	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	3,780	4,500
	Sound level (Rated)	dB(A)	52	56
	Fan speed (Rated)	rpm	650	750
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with below indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN25VG2 + MSZ-LN25VG2**

\*3 220 and 240 V are only -E1.

\*4 At least 2 indoor units must be connected when using indoor unit with capacity lower than 25 class.

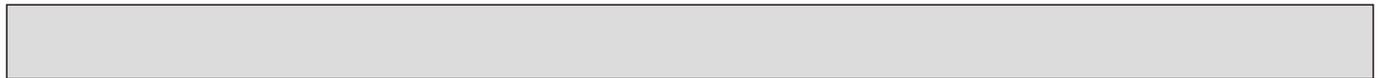
**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0°C Wet-bulb temperature 19.0°C

OUTDOOR Dry-bulb temperature 35.0°C Wet-bulb temperature 24.0°C

HEATING INDOOR Dry-bulb temperature 20.0°C

OUTDOOR Dry-bulb temperature 7.0°C Wet-bulb temperature 6.0°C



Outdoor model			<b>MXZ-6F122VF</b>	
Outdoor unit power supply			Single phase 220 - 230 - 240V, 50 Hz *3	
System	Indoor units number		1 to 6 *4	
	Piping total length	m	Max. 80	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	12.2 ( 3.5 - 14.0 )	14.0 ( 3.5 - 16.5 )
Breaker capacity		A	32	
Electrical data	Power input (Total) *1, *2	W	3,660	3,310
	Running current (Total) *1, *2	A	16.8 - 16.1 - 15.4	15.2 - 14.5 - 13.9
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	16.1	
Coefficient of performance (C.O.P) (Total) *1, *2			3.33	4.23
Compressor	Model		MVB33FBFMC	
	Output	W	3,300	
	Current *1, *2	A	14.2	12.6
	Refrigeration oil (Model)	L	1.10 (FW68CA)	
Fan motor	Model		SIC-88FWJ-D888-4	
	Current *1, *2	A	0.3	
Dimensions W x H x D		mm	950 x 1,048 x 330	
Weight		kg	87	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	3,780	4,620
	Sound level (Rated)	dB(A)	55	57
	Fan speed (Rated)	rpm	650	770
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Refrigerant filling capacity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN25VG2 + MSZ-LN25VG2**

\*3 220 and 240 V are only -[E1].

\*4 At least 2 indoor units must be connected when using indoor unit with capacity lower than 25 class.

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0 °C Wet-bulb temperature 19.0 °C

OUTDOOR Dry-bulb temperature 35.0 °C Wet-bulb temperature 24.0 °C

HEATING INDOOR Dry-bulb temperature 20.0 °C

OUTDOOR Dry-bulb temperature 7.0 °C Wet-bulb temperature 6.0 °C



Outdoor model			<b>MXZ-2F53VFHZ</b>	
Outdoor unit power supply			Single phase 220 -230 - 240 V, 50 Hz	
System	Indoor units number		1 to 2 *3	
	Piping total length	m	Max. 30	
	Connecting pipe length	m	Max. 20	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function			Cooling	Heating
Capacity Rated (Min.-Max.) *2		kW	5.3 (1.1 - 6.0)	6.4 (1.0 - 7.0)
Breaker capacity		A	16	
Electrical data	Power input (Total) *1, *2	W	1,290	1,360
	Running current (Total) *1, *2	A	5.9 - 5.7 - 5.4	6.2 - 6.0 - 5.7
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	6.0	
Coefficient of performance (C.O.P) (Total) *1, *2			4.11	4.71
Compressor	Model		SVB220FUGMC-L1	
	Output	W	1,400	
	Current *1, *2	A	4.9	5.2
	Refrigeration oil (Model)	L	0.6 (FW68CA)	
Fan motor	Model		SIC-88FWJ-D888-4	
	Current *1, *2	A	0.3	
Dimensions W x H x D		mm	950 x 796 x 330	
Weight		kg	61	
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	2,580	2,430
	Sound level (Rated)	dB(A)	45	47
	Fan speed (Rated)	rpm	480	460
	Pre-charged refrigerant quantity (R32)	kg	2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with below indoor units below.

**MSZ-LN18VG2 + MSZ-LN35VG2**

\*3 At least 2 indoor units must be connected when using indoor unit with capacity lower than 25 class.

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0°C Wet-bulb temperature 19.0°C

OUTDOOR Dry-bulb temperature 35.0°C Wet-bulb temperature 24.0°C

HEATING INDOOR Dry-bulb temperature 20.0°C

OUTDOOR Dry-bulb temperature 7.0°C Wet-bulb temperature 6.0°C



Outdoor model		<b>MXZ-4F83VFHZ</b>		
Outdoor unit power supply		Single phase 220 -230 - 240 V, 50 Hz		
System	Indoor units number	1 to 4 *3		
	Piping total length	m	Max. 70	
	Connecting pipe length	m	Max. 25	
	Height difference (Indoor ~ Outdoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
	Height difference (Indoor ~ Indoor)	m	Refer to 8 REFRIGERANT SYSTEM DIAGRAM.	
Function		Cooling	Heating	
Capacity Rated (Min.-Max.) *2	kW	8.3 ( 3.5 - 9.2 )	9.0 ( 3.5 - 11.6 )	
Breaker capacity	A	30		
Electrical data	Power input (Total) *1, *2	W	1,900	1,700
	Running current (Total) *1, *2	A	8.7 - 8.3 - 8.0	7.8 -7.5 -7.2
	Power factor (Total) *1, *2	%	99	
	Starting current (Total) *1, *2	A	8.3	
Coefficient of performance (C.O.P) (Total) *1, *2			4.37	5.29
Compressor	Model	MVB33FBFMC		
	Output	W	2,200	
	Current *1, *2	A	7.0	6.2
	Refrigeration oil (Model)	L	1.10 (FW68CA)	
Fan motor	Model	SIC-88FWJ-D888-4		
	Current *1, *2	A	0.3	
Dimensions W x H x D	mm	950 x 1,048 x 330		
Weight	kg	86		
Special remarks	Air flow (Rated)	m <sup>3</sup> /h	3,780	4,620
	Sound level (Rated)	dB(A)	55	57
	Fan speed (Rated)	rpm	650	770
	Pre-charged refrigerant quantity (R32)		2.4	
	Max refrigerant quantity (R32)	kg	2.4	

\*1 Measured under rated operating frequency.

\*2 When connected with below indoor units below.

**MSZ-LN18VG2 + MSZ-LN18VG2 + MSZ-LN25VG2 + MSZ-LN25VG2**

\*3 At least 2 indoor units must be connected when using indoor unit with capacity lower than 25 class.

**NOTE:** Test conditions are based on ISO 5151. (Refrigerant piping length (one way): 5 m)

COOLING INDOOR Dry-bulb temperature 27.0°C Wet-bulb temperature 19.0°C

OUTDOOR Dry-bulb temperature 35.0°C Wet-bulb temperature 24.0°C

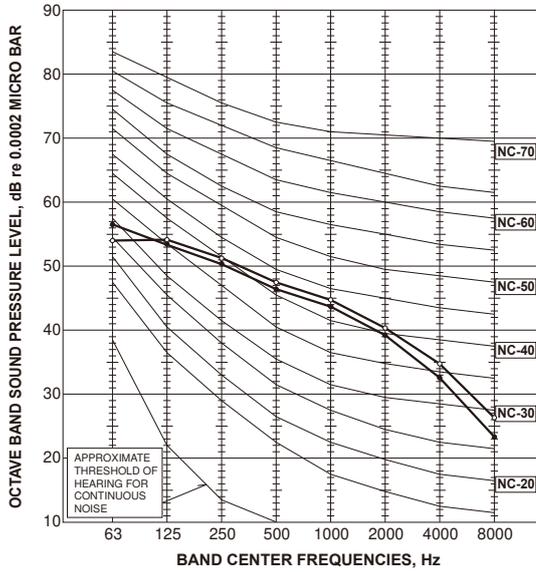
HEATING INDOOR Dry-bulb temperature 20.0°C

OUTDOOR Dry-bulb temperature 7.0°C Wet-bulb temperature 6.0°C

# NOISE CRITERIA CURVES

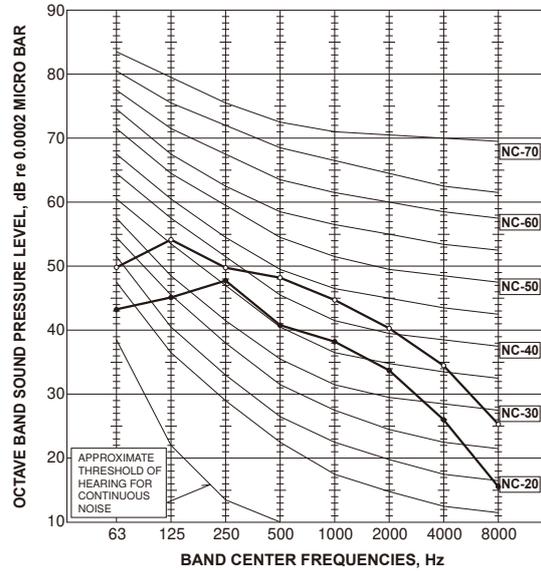
**MXZ-2F33VF**  
**MXZ-2F33VF2**  
**MXZ-2F33VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	49	●—●
High	Heating	50	○—○



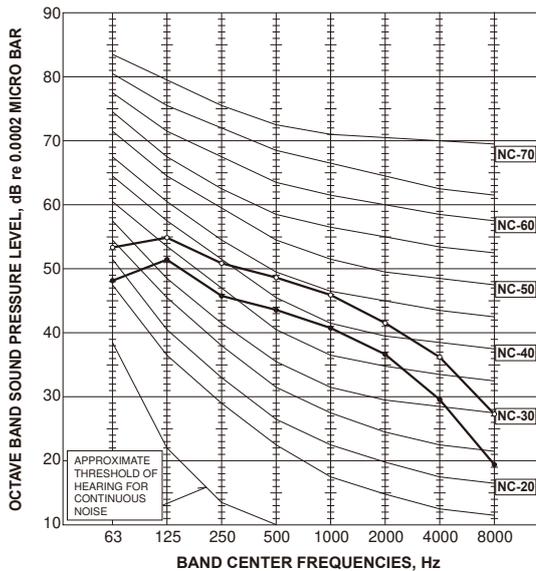
**MXZ-2F42VF**  
**MXZ-2F42VF2**  
**MXZ-2F42VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	44	●—●
High	Heating	50	○—○



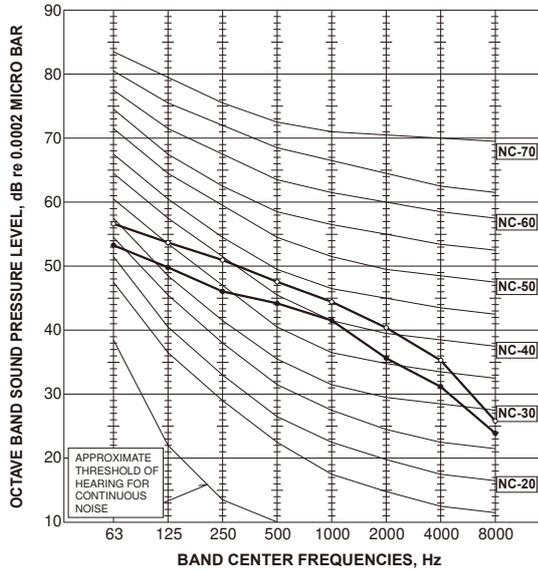
**MXZ-2F53VF**   **MXZ-2F53VFH**  
**MXZ-2F53VF2**   **MXZ-2F53VFH2**  
**MXZ-2F53VF3**   **MXZ-2F53VFH3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	46	●—●
High	Heating	51	○—○



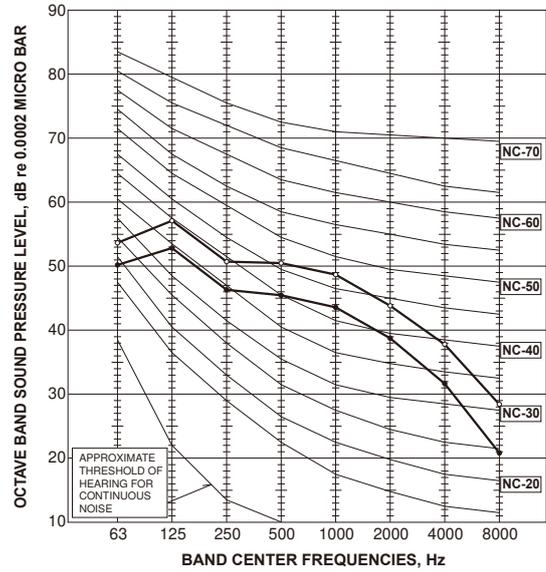
**MXZ-3F54VF**  
**MXZ-3F54VF2**  
**MXZ-3F54VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	46	●—●
High	Heating	50	○—○



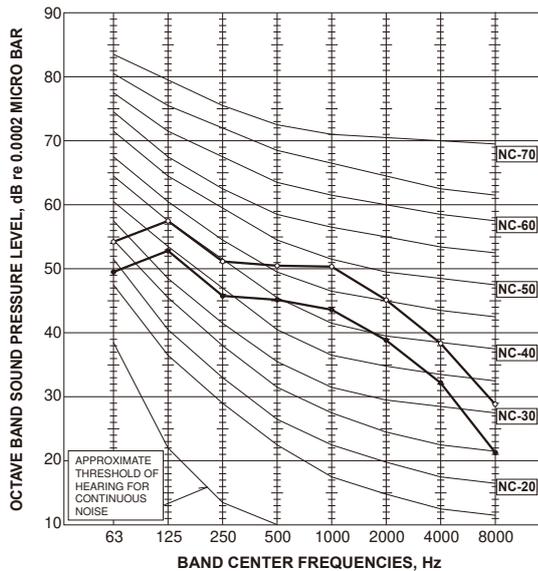
**MXZ-3F68VF**  
**MXZ-3F68VF2**  
**MXZ-3F68VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	48	●—●
High	Heating	53	○—○



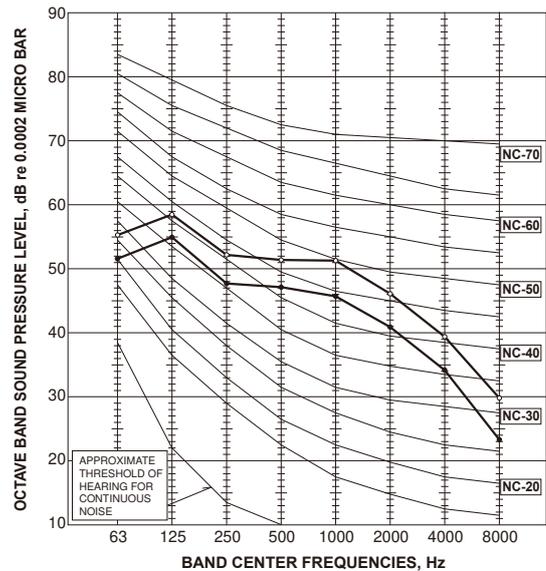
**MXZ-4F72VF**  
**MXZ-4F72VF2**  
**MXZ-4F72VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	48	●—●
High	Heating	54	○—○



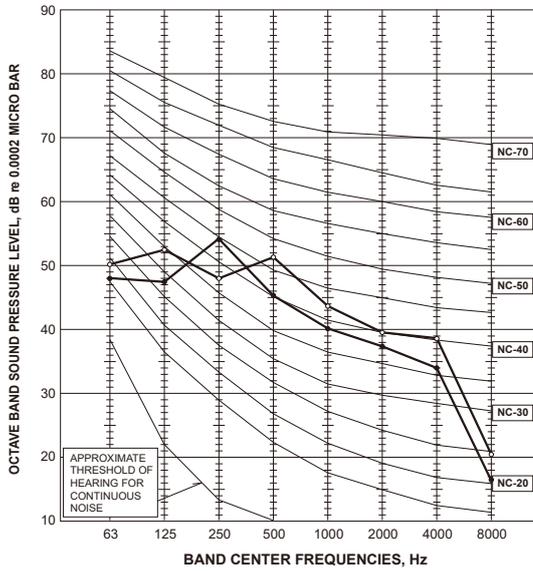
**MXZ-4F80VF2**  
**MXZ-4F80VF3**

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	50	●—●
High	Heating	55	○—○



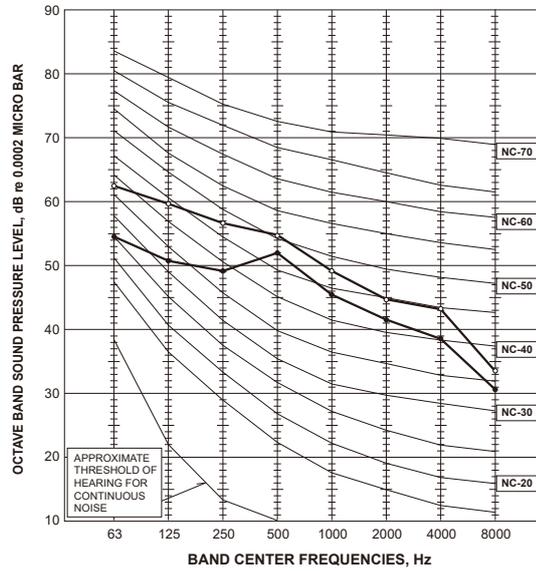
## MXZ-4F83VF

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	49	●—●
High	Heating	51	○—○



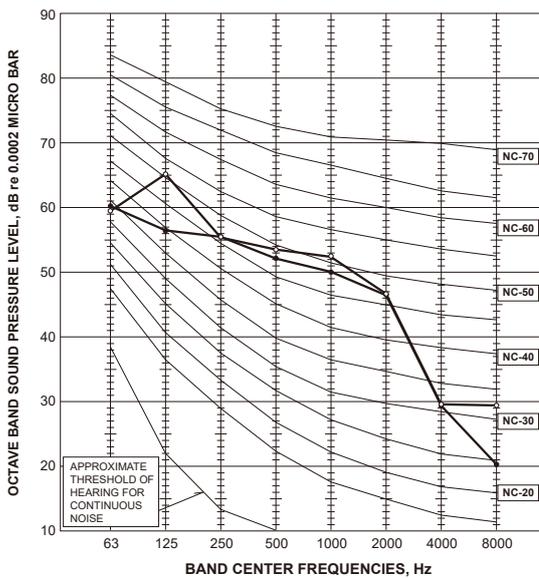
## MXZ-5F102VF

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	52	●—●
High	Heating	56	○—○



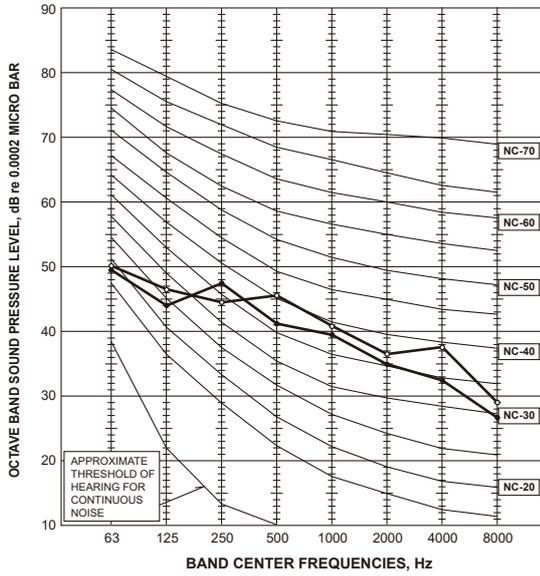
## MXZ-6F122VF

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	55	●—●
High	Heating	57	○—○



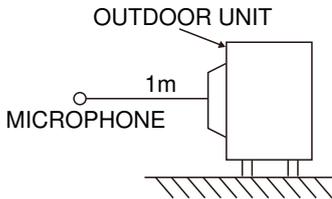
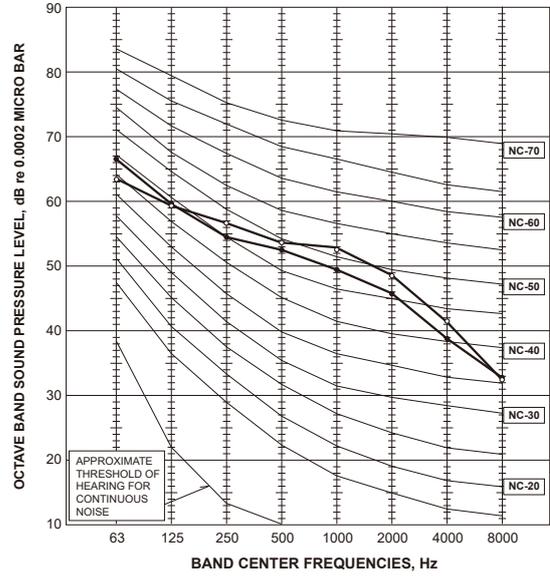
## MXZ-2F53VFHZ

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	45	●—●
High	Heating	47	○—○



## MXZ-4F83VFHZ

FAN SPEED	FUNCTION	SPL(dB(A))	LINE
High	Cooling	55	●—●
High	Heating	57	○—○



Test conditions

Cooling :Dry-bulb temperature 35.0°C Wet-bulb temperature 24.0°C  
 Heating :Dry-bulb temperature 7.0°C Wet-bulb temperature 6.0°C

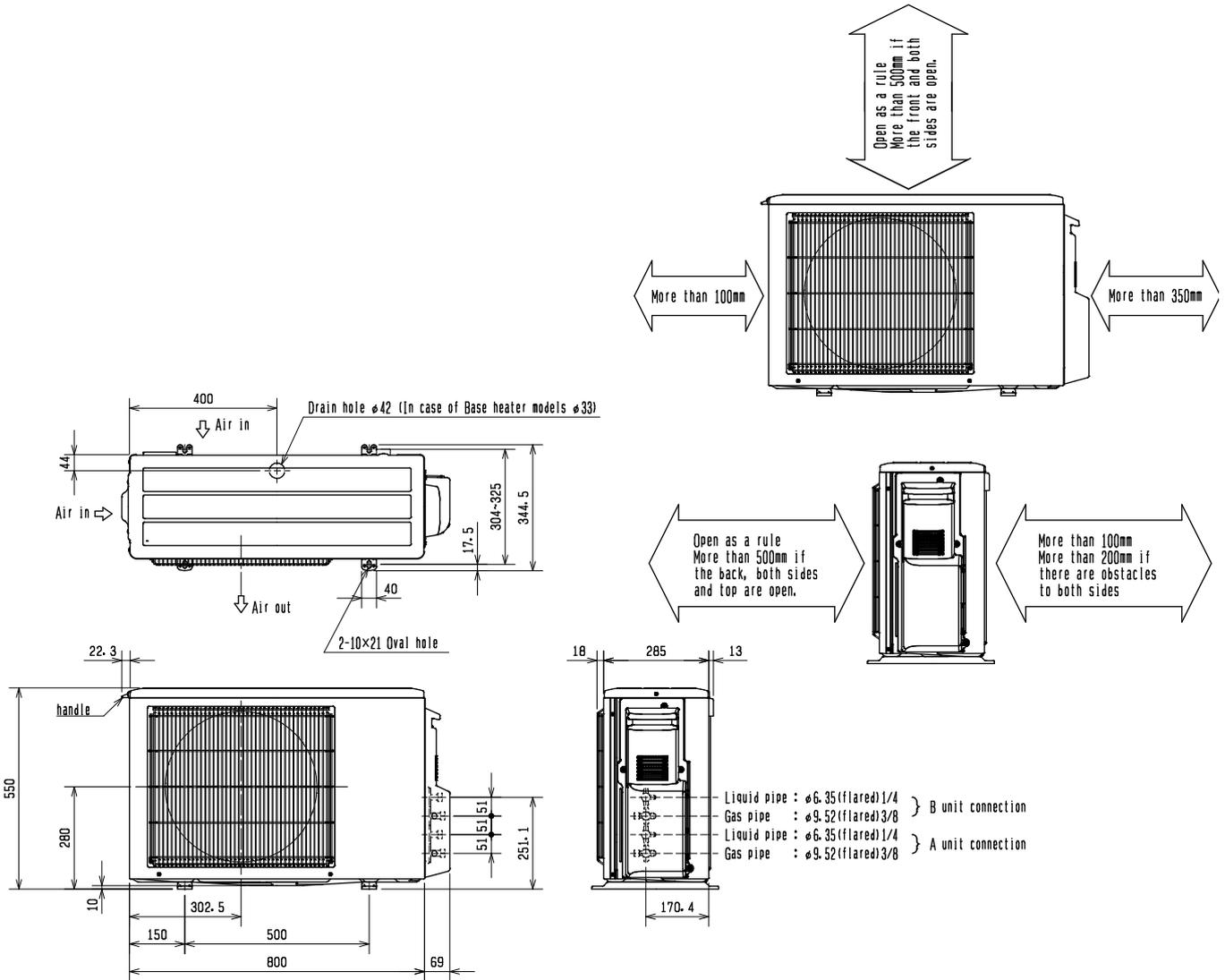
# 6

# OUTLINES AND DIMENSIONS

MXZ-2F33VF    MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH  
 MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2  
 MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3

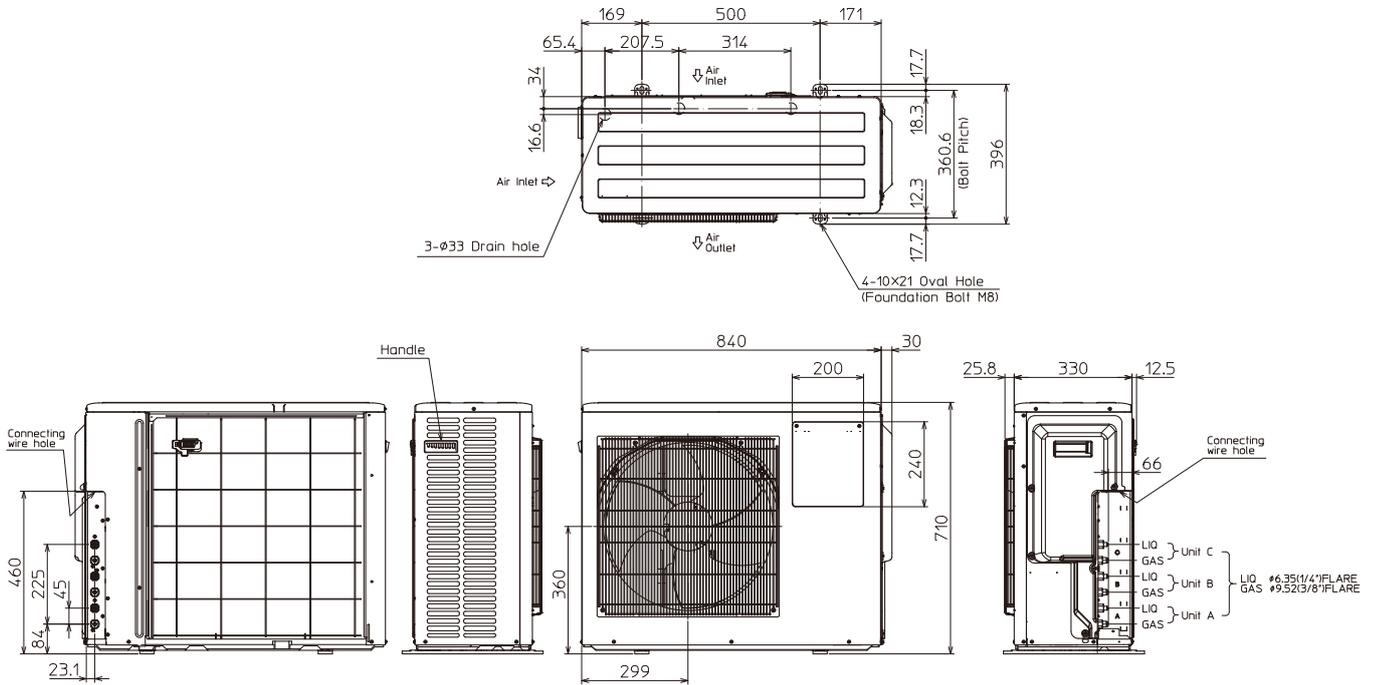
Unit: mm

### 1. Installation space



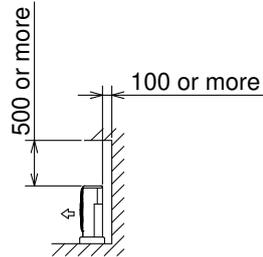
**MXZ-3F54VF MXZ-3F68VF**  
**MXZ-3F54VF2 MXZ-3F68VF2**  
**MXZ-3F54VF3 MXZ-3F68VF3**

Unit: mm

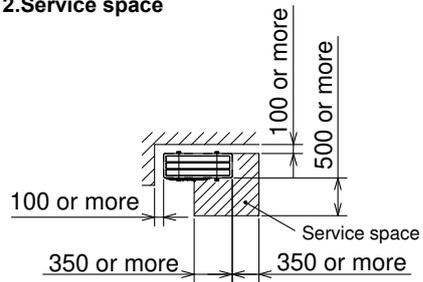


**1. Installation space**

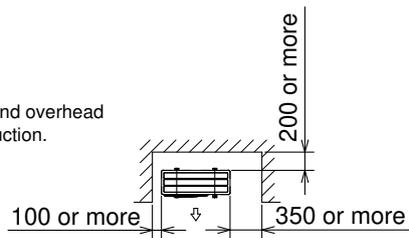
Note : Leave front and both sides free of obstruction.



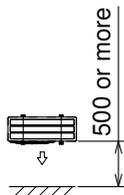
**2. Service space**



Note : Leave front and overhead free of obstruction.



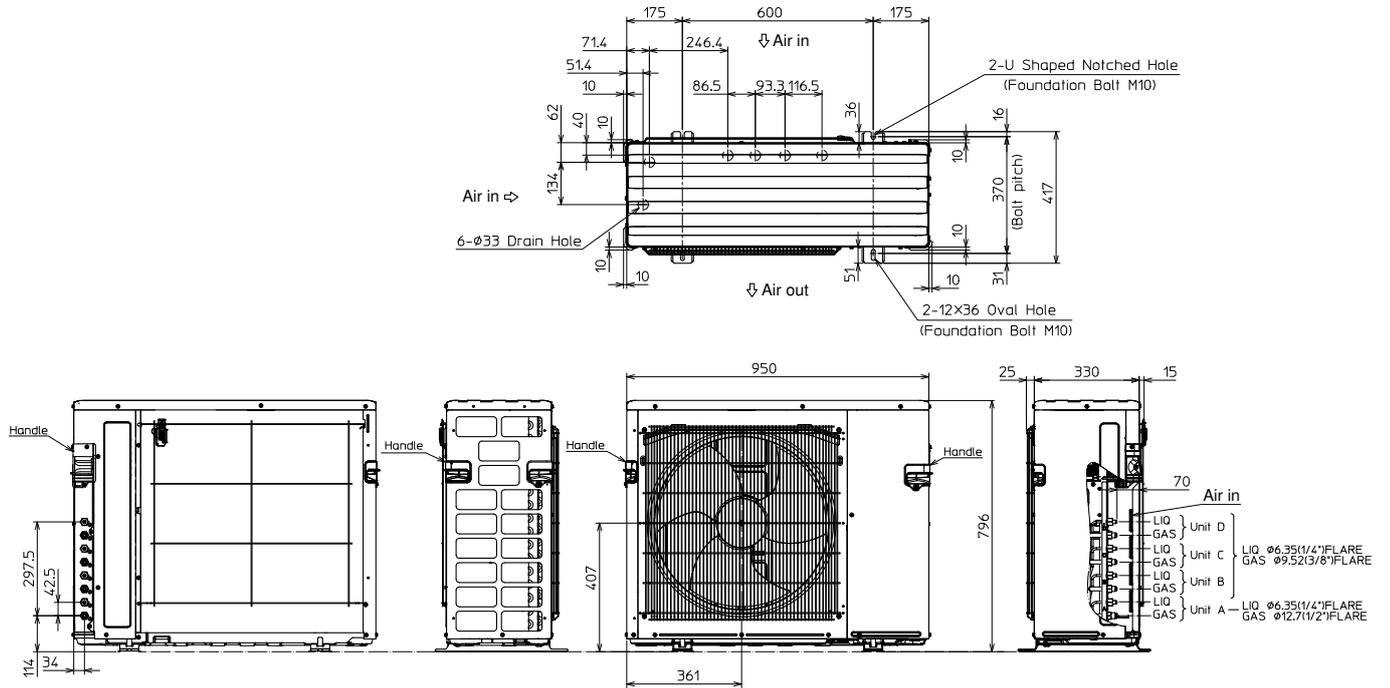
Note : Leave rear, overhead and both sides free of obstruction.



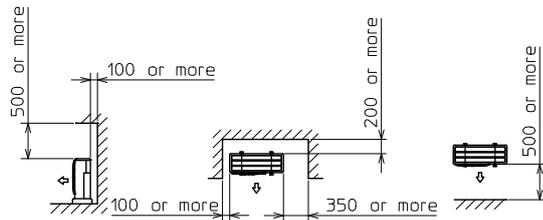


# MXZ-4F83VF

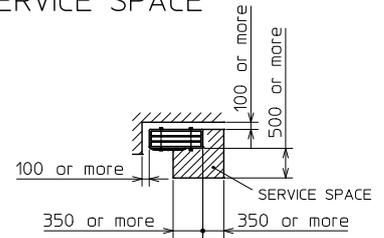
Unit: mm



## 1.FREE SPACE

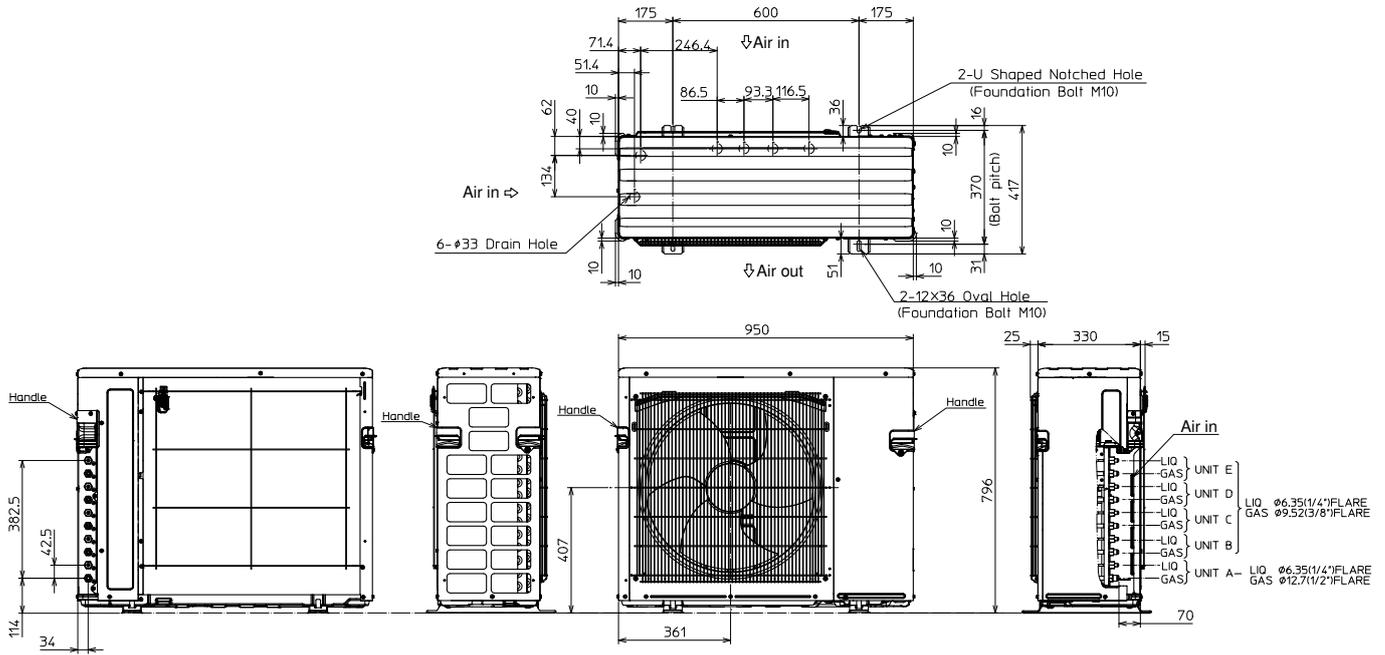


## 2.SERVICE SPACE

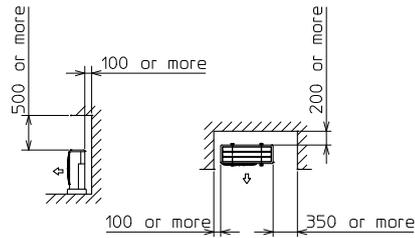


# MXZ-5F102VF

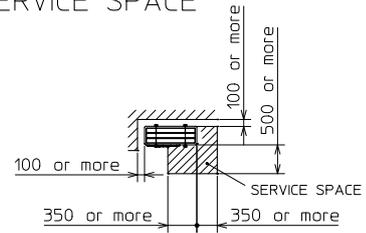
Unit: mm



## 1.FREE SPACE



## 2.SERVICE SPACE

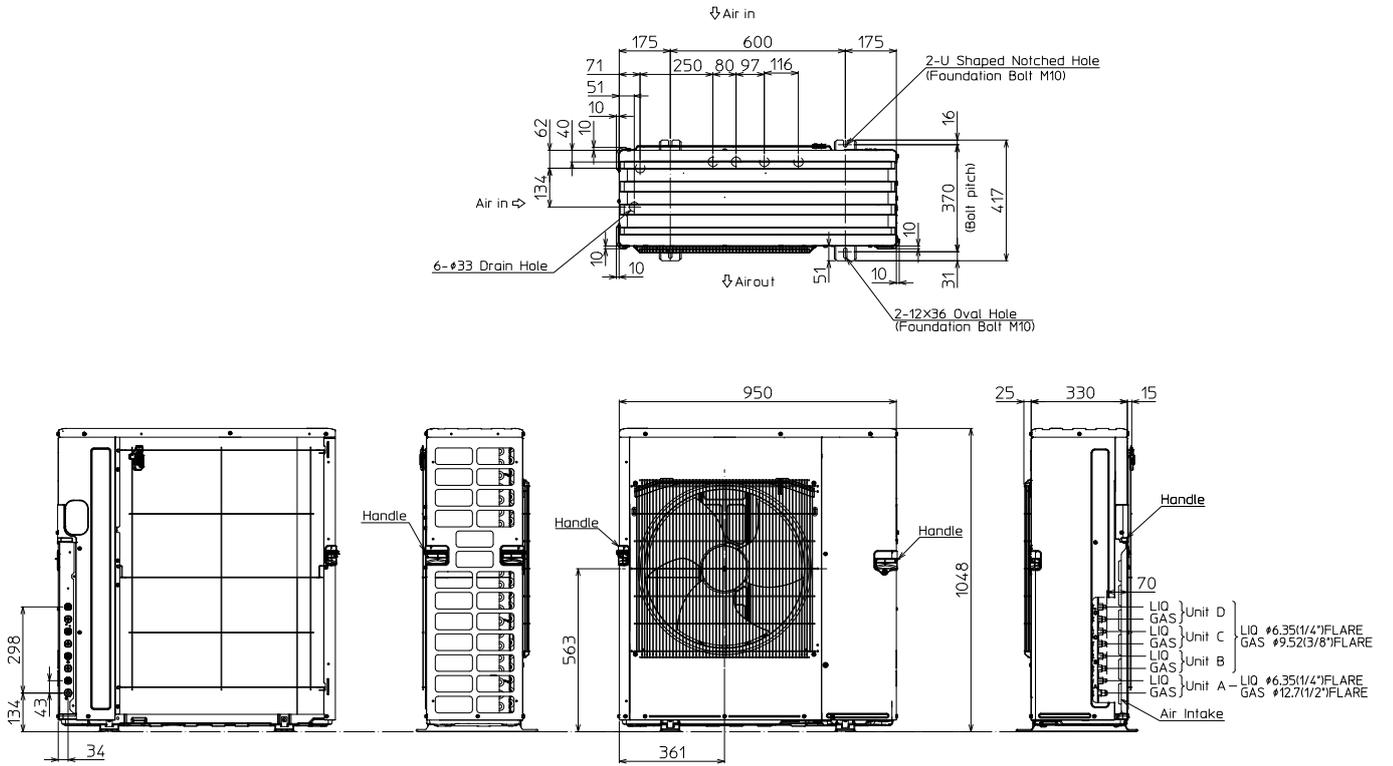




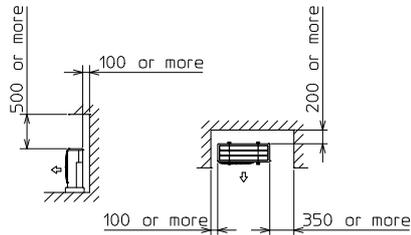


# MXZ-4F83VFHZ

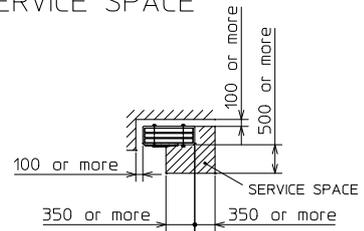
Unit: mm



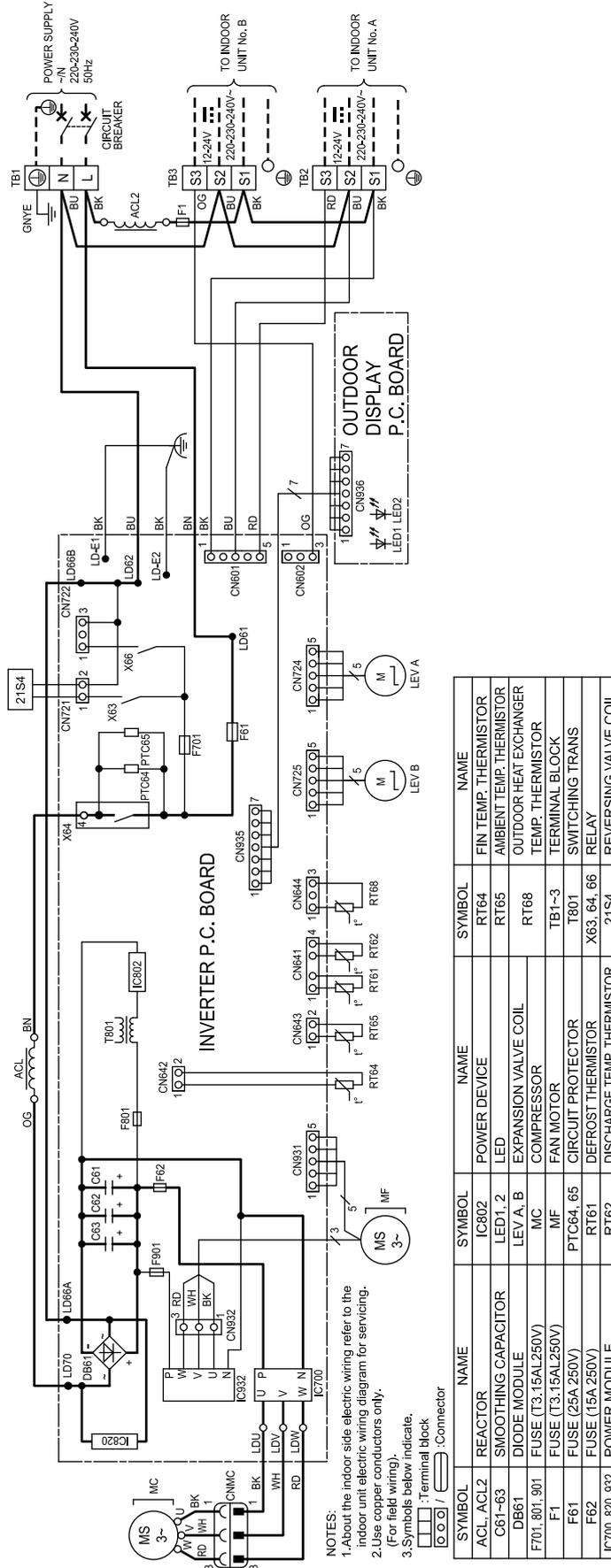
## 1.FREE SPACE



## 2.SERVICE SPACE



**MXZ-2F33VF -[E1], [ET1] MXZ-2F42VF -[E1], [ET1] MXZ-2F53VF -[E1], [ET1]**

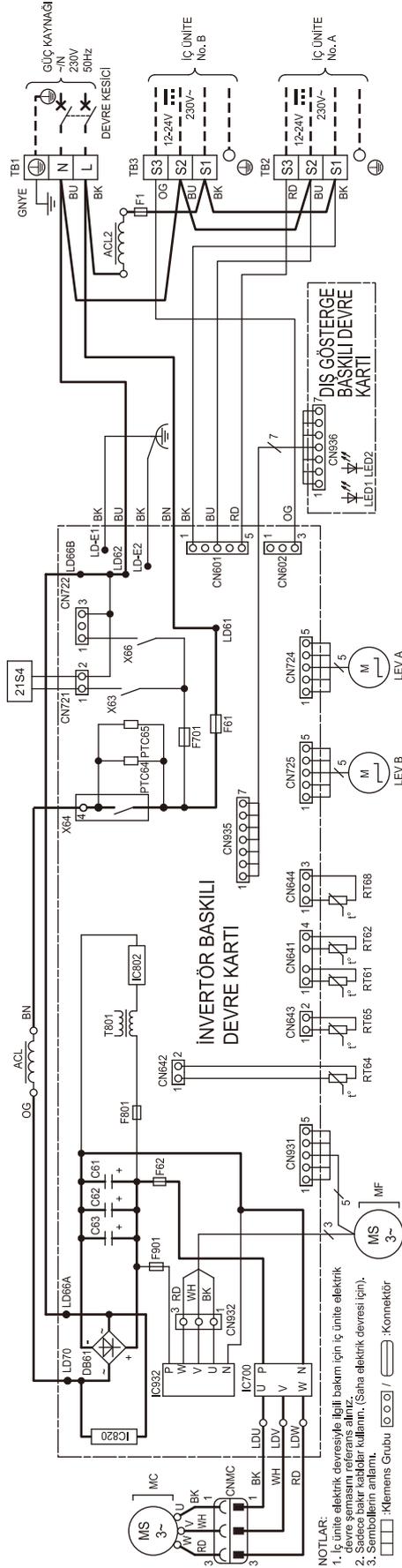


- NOTES:**
1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for servicing. (For field wiring).
  2. Use copper conductors only.
  3. Symbols below indicate.
    - □ □ □ / □ □ □ □ : Terminal block
    - □ □ □ / □ □ □ □ : Connector

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
IC802	REACTOR	RT64	POWER DEVICE	RT64	FIN TEMP. THERMISTOR
LED1, 2	SMOOTHING CAPACITOR	RT65	LED	RT65	AMBIENT TEMP. THERMISTOR
LEV A, B	DIODE MODULE	RT68	EXPANSION VALVE COIL	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
MC	FUSE (T3:15AL250V)	TB1-3	COMPRESSOR	TB1-3	TERMINAL BLOCK
MF	FUSE (T3:15AL250V)	T801	FAN MOTOR	T801	SWITCHING TRANS
PTC64, 65	FUSE (25A, 250V)	RT61	CIRCUIT PROTECTOR	X63, 64, 66	RELAY
RT61	FUSE (15A, 250V)	RT62	DEFROST THERMISTOR	21S4	REVERSING VALVE COIL
IC700, 820, 932	POWER MODULE	RT62	DISCHARGE TEMP. THERMISTOR		



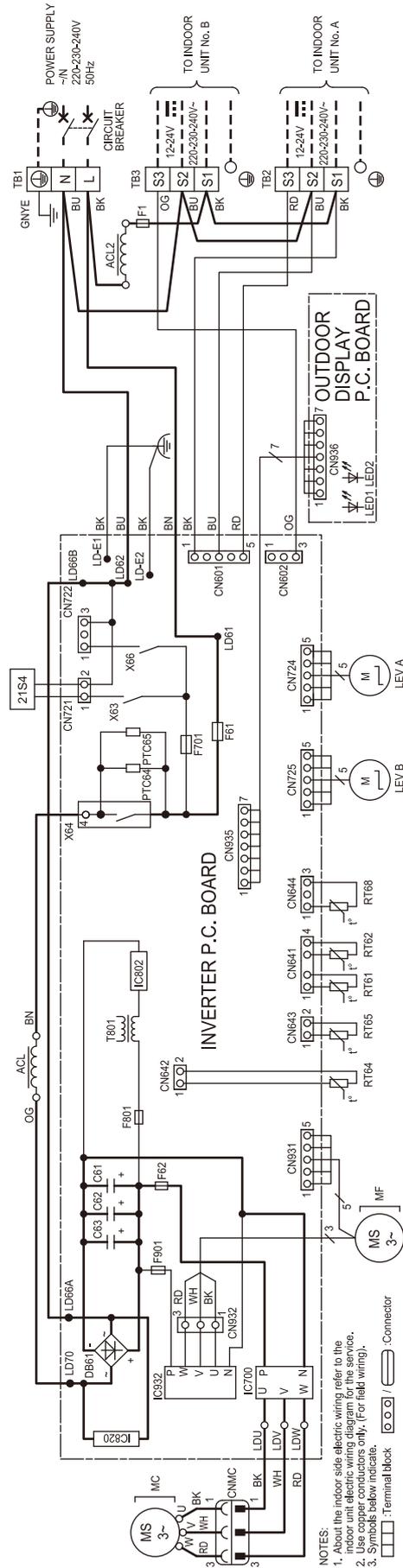
MXZ-2F33VF2 - [ET1] MXZ-2F42VF2 - [ET1] MXZ-2F53VF2 - [ET1]



NOTLAR:  
 1. İç ünite elektrik devresiyile ilgili bakım için iç ünite elektrik devre şemasını referans alınınız.  
 2. İç ünite elektrik devresiyile ilgili bakım için dış ünite elektrik devresiyile ilgili referans alınınız.  
 3. Sembollerin anlamı:  
 □ :Klemens Grubu □ □ □ □ / □ □ □ □ :Konnektör

SEMBOLE	PARÇA ADI	SEMBOLE	PARÇA ADI
ACL, ACL2	REAKTÖR	IC802	GÜÇ ÇİHAZI
C61-63	KAPASİTÖR	LED1, 2	LED
DB61	DIYOT MODÜLÜ	LEV A, B	GENLEŞME VANASI SARGISI
F701, 801, 901	SİGORTA (T3,15AL,250V)	MC	KOMPRESÖR
F1	SİGORTA (T3,15AL,250V)	MF	FAN MOTORU
F61	SİGORTA (25A,250V)	PTC64, 65	DEVRE KORUMASI
F62	SİGORTA (15A,250V)	RT61	DEFROST TERMİSTÖRÜ
IC700, 820, 932	GÜÇ MODÜLÜ	RT62	BASMA SICAKLIK TERMİSTÖRÜ
		RT64	İNVERTÖR TERMİSTÖRÜ
		RT65	İNVERTÖR TERMİSTÖRÜ
		RT66	İNVERTÖR TERMİSTÖRÜ
		RT68	İNVERTÖR TERMİSTÖRÜ
		T801	TRANSFORMATÖR
		X63, 64, 66	RÖLE
		21S4	İKİ YÖNLÜ VANA SARGISI

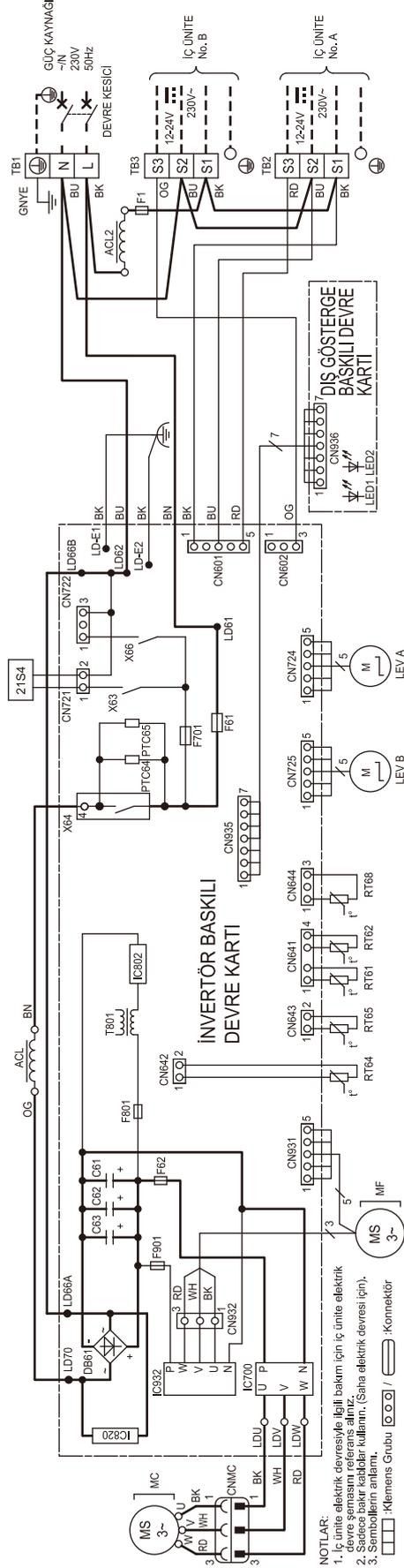
**MXZ-2F33VF3 - [E1] MXZ-2F42VF3 - [E1] MXZ-2F53VF3 - [E1]**



- NOTES:
1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.
  2. Use copper conductors only. (For field wiring).
  3. Symbols refer to the legend.

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL, ACL2	REACTOR	IC802	POWER DEVICE	RT64	FIN TEMP. THERMISTOR
C61~63	SMOOTHING CAPACITOR	LED1, 2	LED	RT65	AMBIENT TEMP. THERMISTOR
DB61	DIODE MODULE	LEV A, B	EXPANSION VALVE COIL	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
F701, 801, 901	FUSE (T3, 15A/250V)	MC	COMPRESSOR	TB1-3	TERMINAL BLOCK
F1	FUSE (T3, 15A/250V)	MF	FAN MOTOR	T801	TRANSFORMER
F61	FUSE (25A 250V)	PTC64, 65	CIRCUIT PROTECTOR	X63, 64, 66	RELAY
F62	FUSE (15A 250V)	RT61	DEFROST THERMISTOR	21S4	REVERSING VALVE COIL
IC700, 820, 932	POWER MODULE	RT62	DISCHARGE TEMP. THERMISTOR		

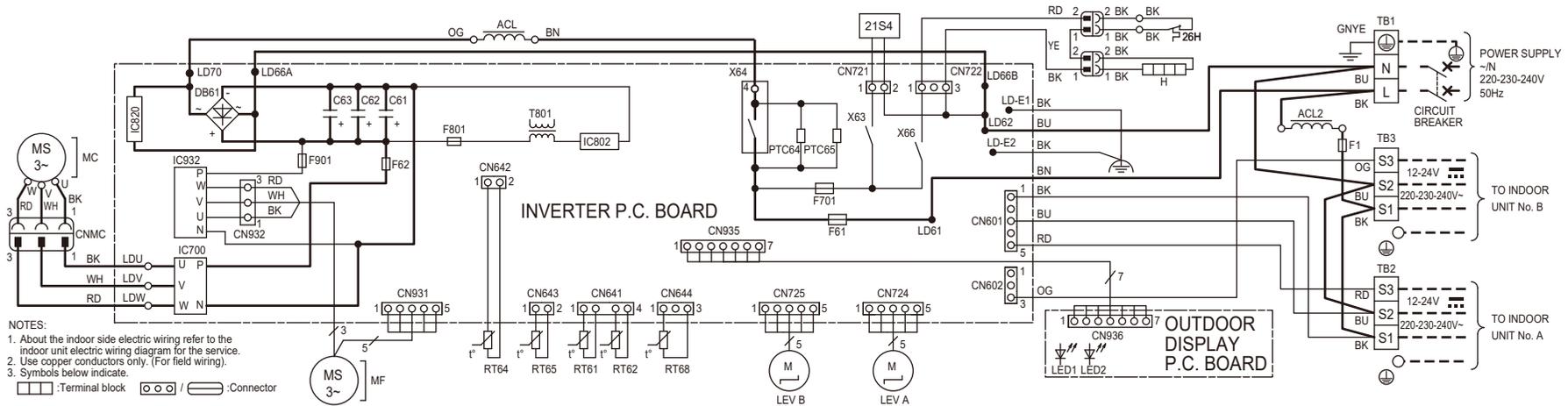
MXZ-2F33VF3 - [ET1] MXZ-2F42VF3 - [ET1] MXZ-2F53VF3 - [ET1]



NOTLAR:  
 1. İç ünite elektrik devresiyle ilgili bakımı için iç ünite elektrik devre şemasını referans alınınız.  
 2. Sadece bakır kablolar kullanınız. (Sahra elektrik devresi için).  
 3. Sembol için bakınız.  
 4. Klemens Grubu [ ] / [ ] :Konnektör

SEMBOLE	PARÇA ADI	SEMBOLE	PARÇA ADI
ACL, ACL2	REAKTÖR	IC802	GÜÇ ÇIHAZI
C61-63	KAPASİTÖR	LED1, 2	LED
DB61	DIYOT MODÜLÜ	LEV A, B	GENLEŞME VANASI SARGISI
F701, 801, 901	SİGORTA (T3,15AL,250V)	MC	KOMPRESÖR
F1	SİGORTA (T3,15AL,250V)	MF	FAN MOTORU
F61	SİGORTA (25A,250V)	PTC64, 65	DEVRE KORUMASI
F62	SİGORTA (15A,250V)	RT61	DEFROST TERMİSTÖRÜ
IC700, 820, 932	GÜÇ MODÜLÜ	RT62	BASMA SICAKLIK TERMİSTÖRÜ
		RT64	LEV A
		RT65	LEV B
		RT66	LEV A
		RT67	LEV B
		RT68	LEV A
		RT69	LEV B
		RT70	LEV A
		RT71	LEV B
		RT72	LEV A
		RT73	LEV B
		RT74	LEV A
		RT75	LEV B
		RT76	LEV A
		RT77	LEV B
		RT78	LEV A
		RT79	LEV B
		RT80	LEV A
		RT81	LEV B
		RT82	LEV A
		RT83	LEV B
		RT84	LEV A
		RT85	LEV B
		RT86	LEV A
		RT87	LEV B
		RT88	LEV A
		RT89	LEV B
		RT90	LEV A
		RT91	LEV B
		RT92	LEV A
		RT93	LEV B
		RT94	LEV A
		RT95	LEV B
		RT96	LEV A
		RT97	LEV B
		RT98	LEV A
		RT99	LEV B
		RT100	LEV A





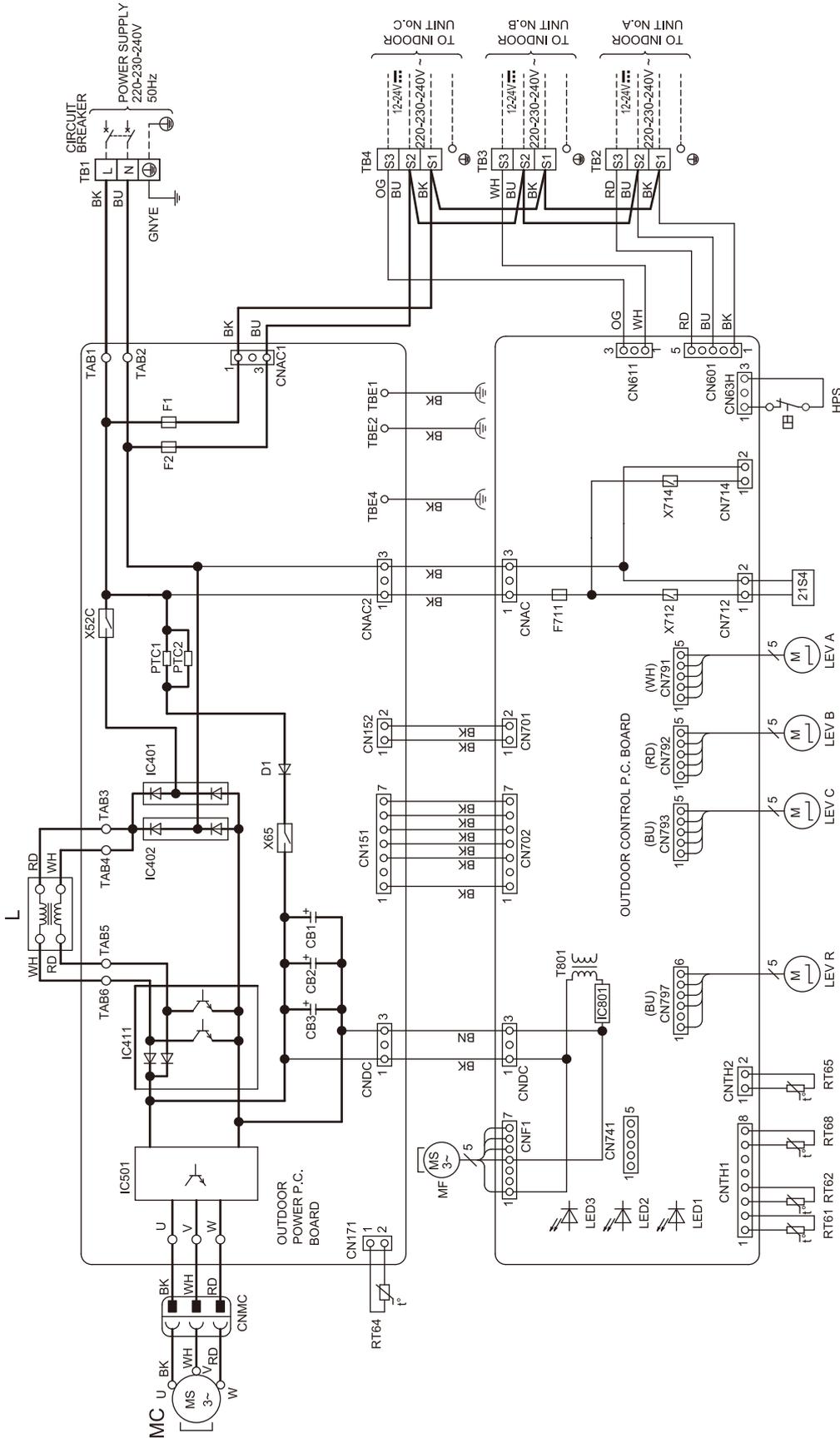
- NOTES:  
 1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
 2. Use copper conductors only. (For field wiring).  
 3. Symbols below indicate.

Terminal block: Connector:

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL, ACL2	REACTOR	IC802	POWER DEVICE	RT65	AMBIENT TEMP. THERMISTOR
C61~63	SMOOTHING CAPACITOR	LED1, 2	LED	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB61	DIODE MODULE	LEV A, B	EXPANSION VALVE COIL	TB1~3	TERMINAL BLOCK
F701, 801, 901	FUSE (T3.15A/250V)	MC	COMPRESSOR	T801	TRANSFORMER
F1	FUSE (T3.15A/250V)	MF	FAN MOTOR	X63, 64, 66	RELAY
F61	FUSE (25A 250V)	PTC64, 65	CIRCUIT PROTECTOR	21S4	REVERSING VALVE COIL
F62	FUSE (15A 250V)	RT61	DEFROST THERMISTOR	26H	HEATER PROTECTOR
H	DEFROST HEATER	RT62	DISCHARGE TEMP. THERMISTOR		
IC700, 820, 932	POWER MODULE	RT64	FIN TEMP. THERMISTOR		

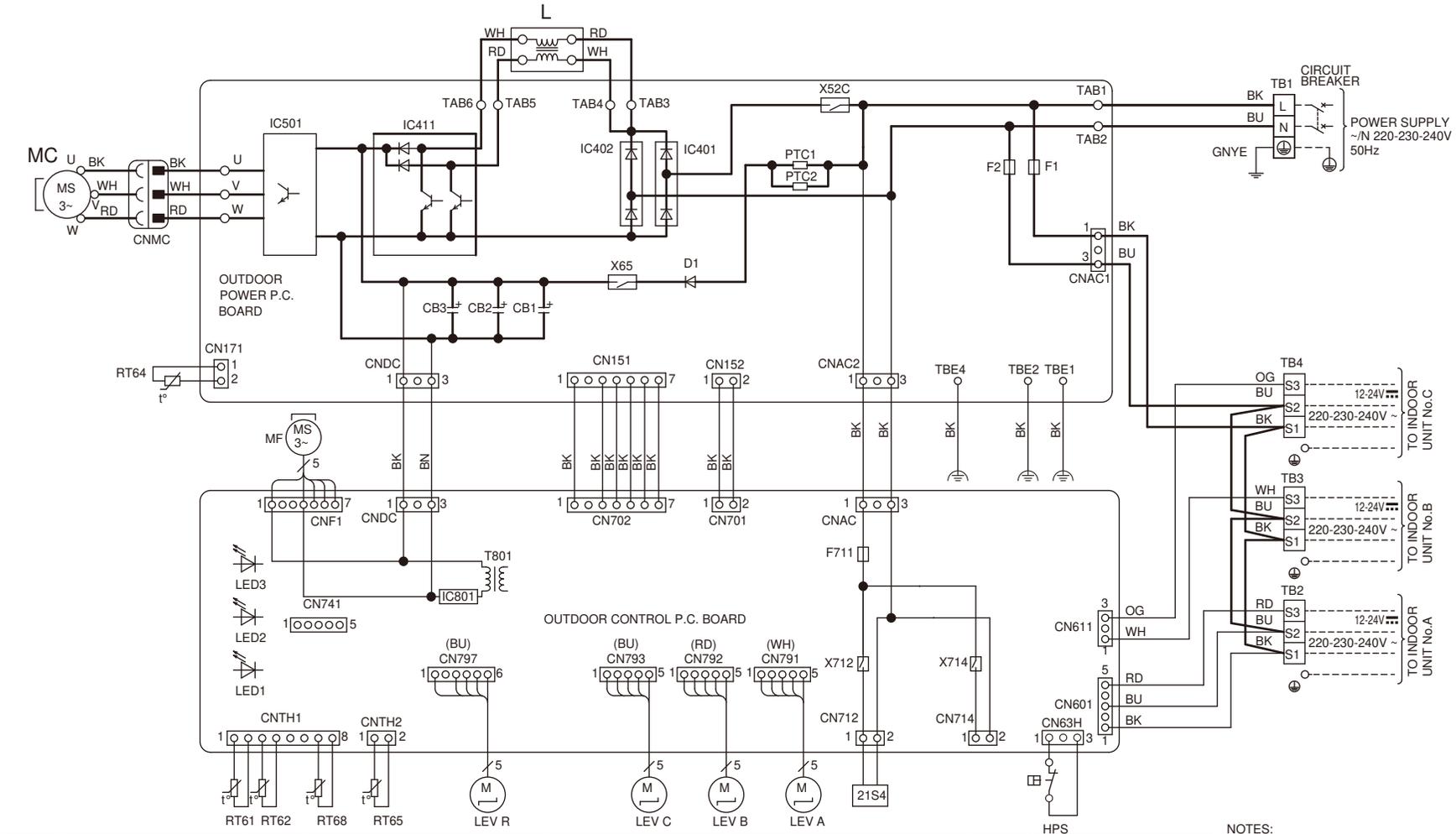


**MXZ-3F54VF** - E1, ET1, E2, ET2  
**MXZ-3F68VF** - E1, ET1, E2, ET2



NOTES:  
 1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
 2. Use copper conductors only (For field wiring).  
 3. Symbols below indicate.  
 □□□: terminal block  
 □□□□: terminal block

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1-3	SMOOTHING CAPACITOR	IC401,402	DIODE BRIDGE	LEV A-C/R	EXPANSION VALVE COIL	X52C	RELAY
D1	DIODE	IC411	POWER FACTOR CONTROLLER	MC	COMPRESSOR	X65	RELAY
F1	FUSE(T6.3AL250V)	IC501	POWER MODULE	MF	FAN MOTOR	X712	RELAY
F2	FUSE(T6.3AL250V)	IC801	POWER DEVICE	PTC1,2	CIRCUIT PROTECTION	X714	RELAY
F711	FUSE(T3.15AL250V)	L	REACTOR	RT61	DEFROST THERMISTOR		
HPS	HIGH PRESSURE SWITCH	LED1-3	LED	RT62	DISCHARGE TEMP. THERMISTOR	21S4	SOLENOID COIL
				RT65	LEAKAGE CURRENT THERMISTOR		
				RT66	AMBIENT TEMP. THERMISTOR		
				RT68	OUTDOOR HEAT EXCHANGER		
				T801	TEMPERATURE THERMISTOR		
				TB1-4	TERMINAL BLOCK		



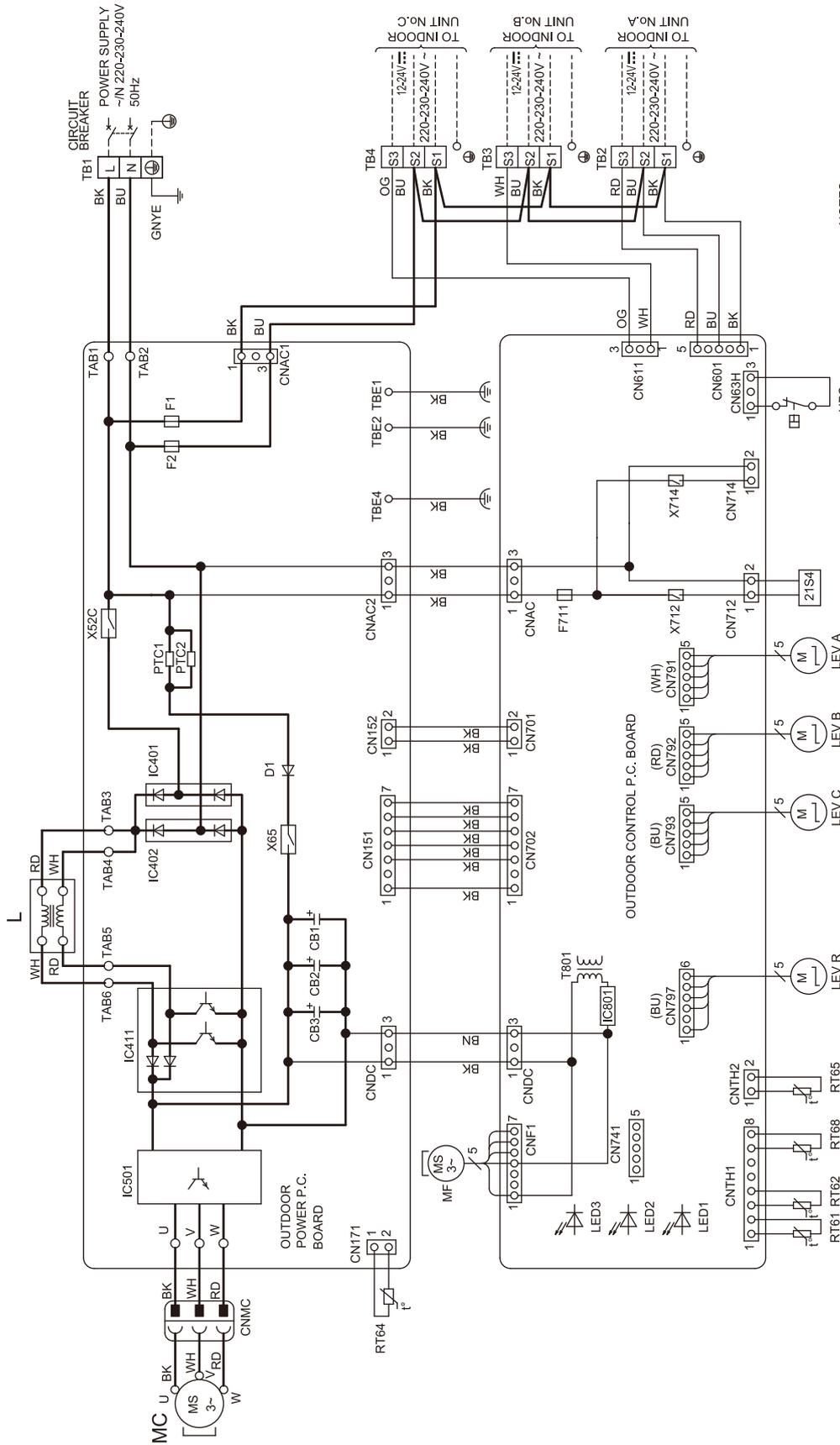
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1-3	SMOOTHING CAPACITOR	IC401,402	DIODE BRIDGE	LEV A-C,R	EXPANSION VALVE COIL	RT64	FIN TEMP. THERMISTOR	X52C	RELAY
D1	DIODE	IC411	POWER FACTOR CONTROLLER	MC	COMPRESSOR	RT65	AMBIENT TEMP. THERMISTOR	X65	RELAY
F1	FUSE(T6.3AL250V)	IC501	POWER MODULE	MF	FAN MOTOR	RT68	OUTDOOR HEAT EXCHANGER TEMPERATURE THERMISTOR	X712	RELAY
F2	FUSE(T6.3AL250V)	IC801	POWER DEVICE	PTC1,2	CIRCUIT PROTECTION			X714	RELAY
F711	FUSE(T3.15AL250V)	L	REACTOR	RT61	DEFROST THERMISTOR	T801	TRANSFORMER	21S4	REVERSING VALVE
HPS	HIGH PRESSURE SWITCH	LED1-3	LED	RT62	DISCHARGE TEMP. THERMISTOR	TB1-4	TERMINAL BLOCK		SOLENOID COIL

NOTES:  
 1.About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
 2.Use copper conductors only (For field wiring).  
 3.Symbols below indicate.  
 □:Terminal block  
 ○:Connector

MXZ-3F54V/F2 - E1  
 MXZ-3F68V/F2 - E1



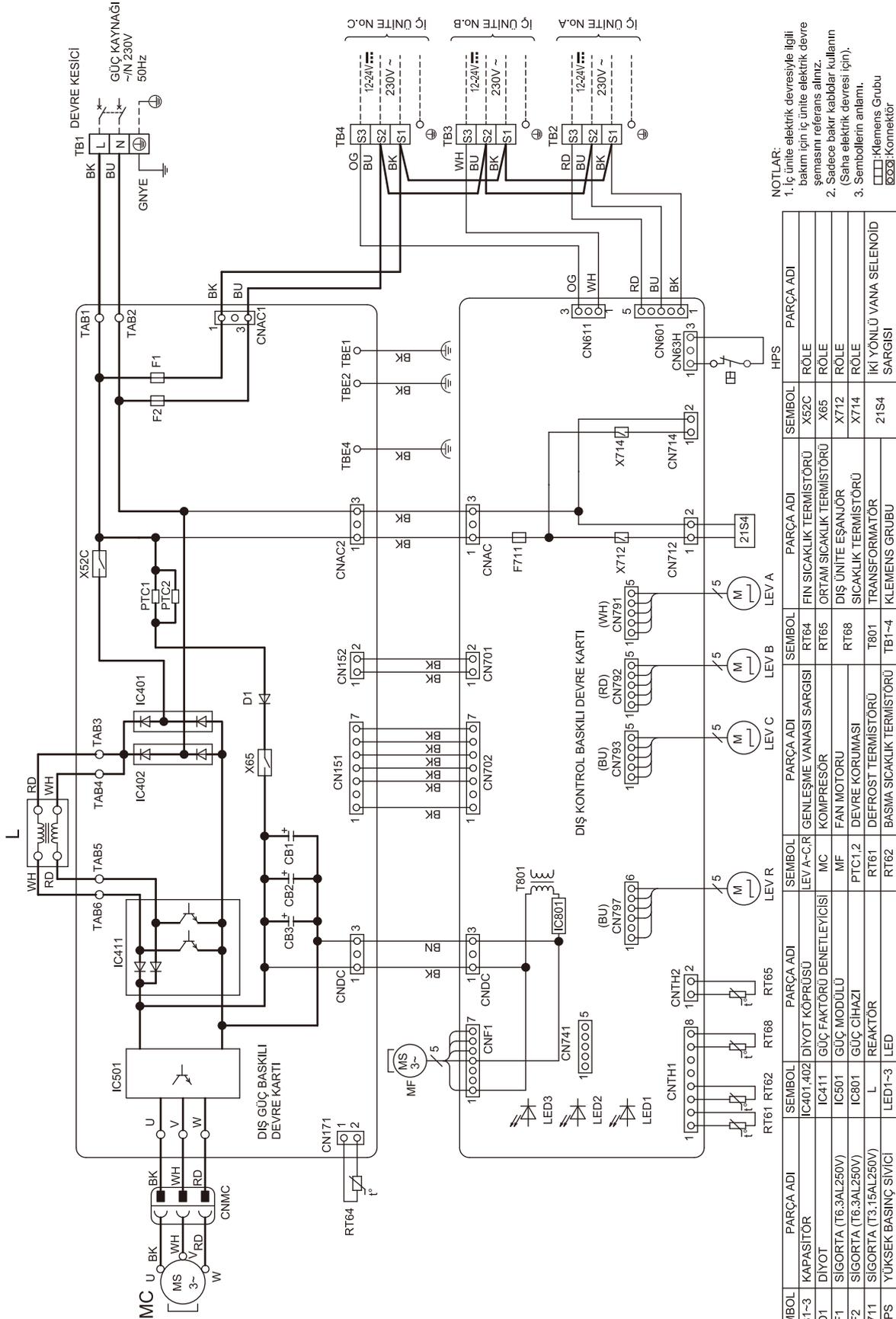
**MXZ-3F54VF3 - E1**  
**MXZ-3F68VF3 - E1**



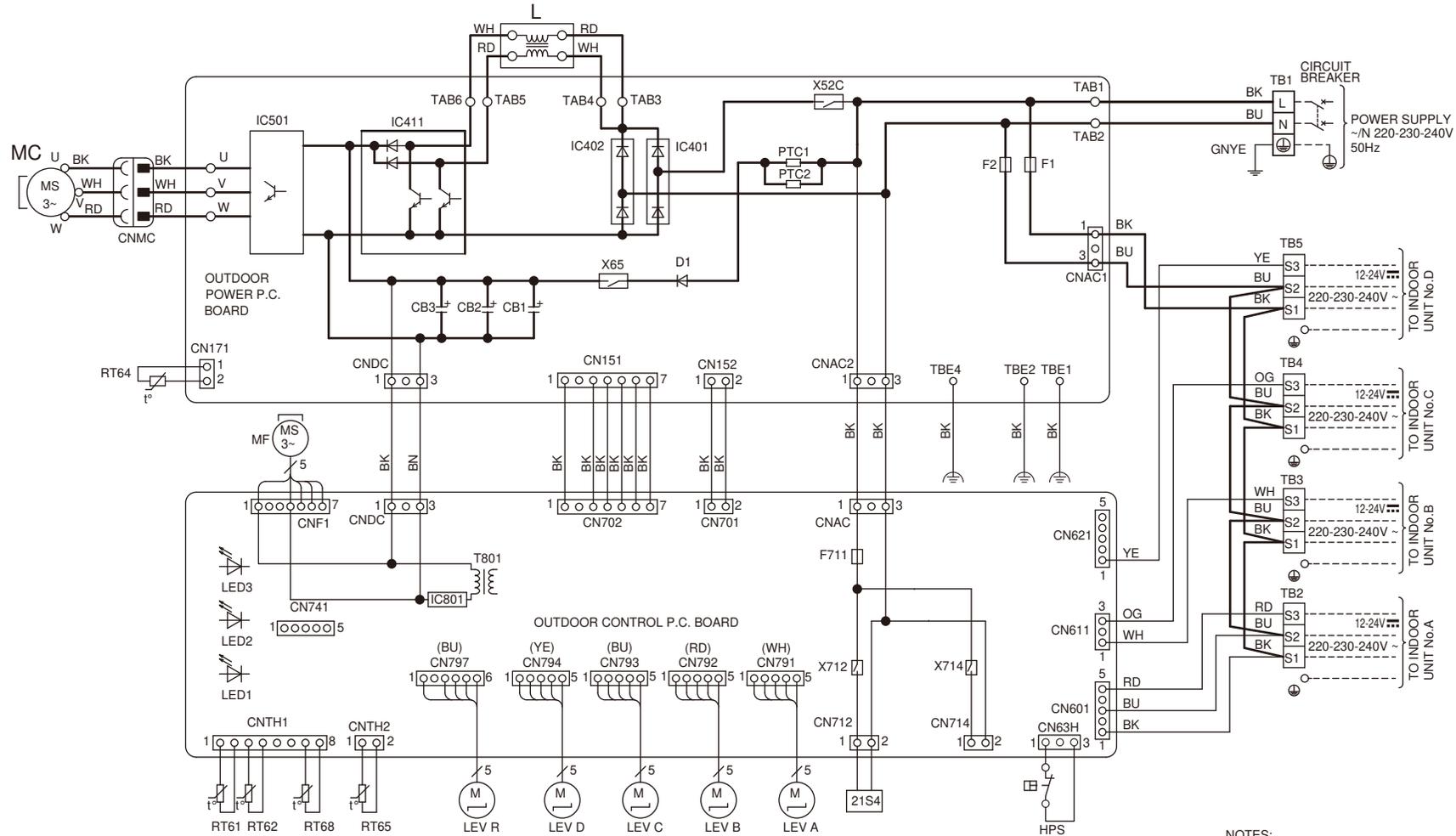
NOTES:  
 1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
 2. Use copper conductors only (For field wiring).  
 3. Symbols below indicate.  
 □ Terminal block  
 ○ Connector

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1-3	SMOOTHING CAPACITOR	IC401,402	DIODE BRIDGE	LEV A-CR	EXPANSION VALVE COIL	RT64	FIN TEMP. THERMISTOR
D1	DIODE	IC411	POWER FACTOR CONTROLLER	MC	COMPRESSOR	RT65	AMBIENT TEMP. THERMISTOR
F1	FUSE(T6.3AL250V)	IC501	POWER MODULE	MF	FAN MOTOR	RT66	OUTDOOR HEAT EXCHANGER
F2	FUSE(T6.3AL250V)	IC801	POWER DEVICE	PTC1,2	CIRCUIT PROTECTOR	RT68	TEMP. THERMISTOR
F711	FUSE(T3.15AL250V)	L	REACTOR	RT61	DEFROST THERMISTOR	T801	TRANSFORMER
HPS	HIGH PRESSURE SWITCH	LED1-3	LED	RT62	DISCHARGE TEMP. THERMISTOR	TB1-4	TERMINAL BLOCK
						21S4	SOLENOID COIL

**MXZ-3F54VF3 - [ET1]**  
**MXZ-3F68VF3 - [ET1]**







SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CB1-3	SMOOTHING CAPACITOR	IC401,402	DIODE BRIDGE	LEV A~D,R	EXPANSION VALVE COIL	RT64	FIN TEMP. THERMISTOR	X52C	RELAY
D1	DIODE	IC411	POWER FACTOR CONTROLLER	MC	COMPRESSOR	RT65	AMBIENT TEMP. THERMISTOR	X65	RELAY
F1	FUSE(T6.3AL250V)	IC501	POWER MODULE	MF	FAN MOTOR	RT68	OUTDOOR HEAT EXCHANGER	X712	RELAY
F2	FUSE(T6.3AL250V)	IC801	POWER DEVICE	PTC1,2	CIRCUIT PROTECTION		TEMPERATURE THERMISTOR	X714	RELAY
F711	FUSE(T3.15AL250V)	L	REACTOR	RT61	DEFROST THERMISTOR	T801	TRANSFORMER	21S4	REVERSING VALVE SOLENOID COIL
HPS	HIGH PRESSURE SWITCH	LED1~3	LED	RT62	DISCHARGE TEMP. THERMISTOR	TB1~5	TERMINAL BLOCK		

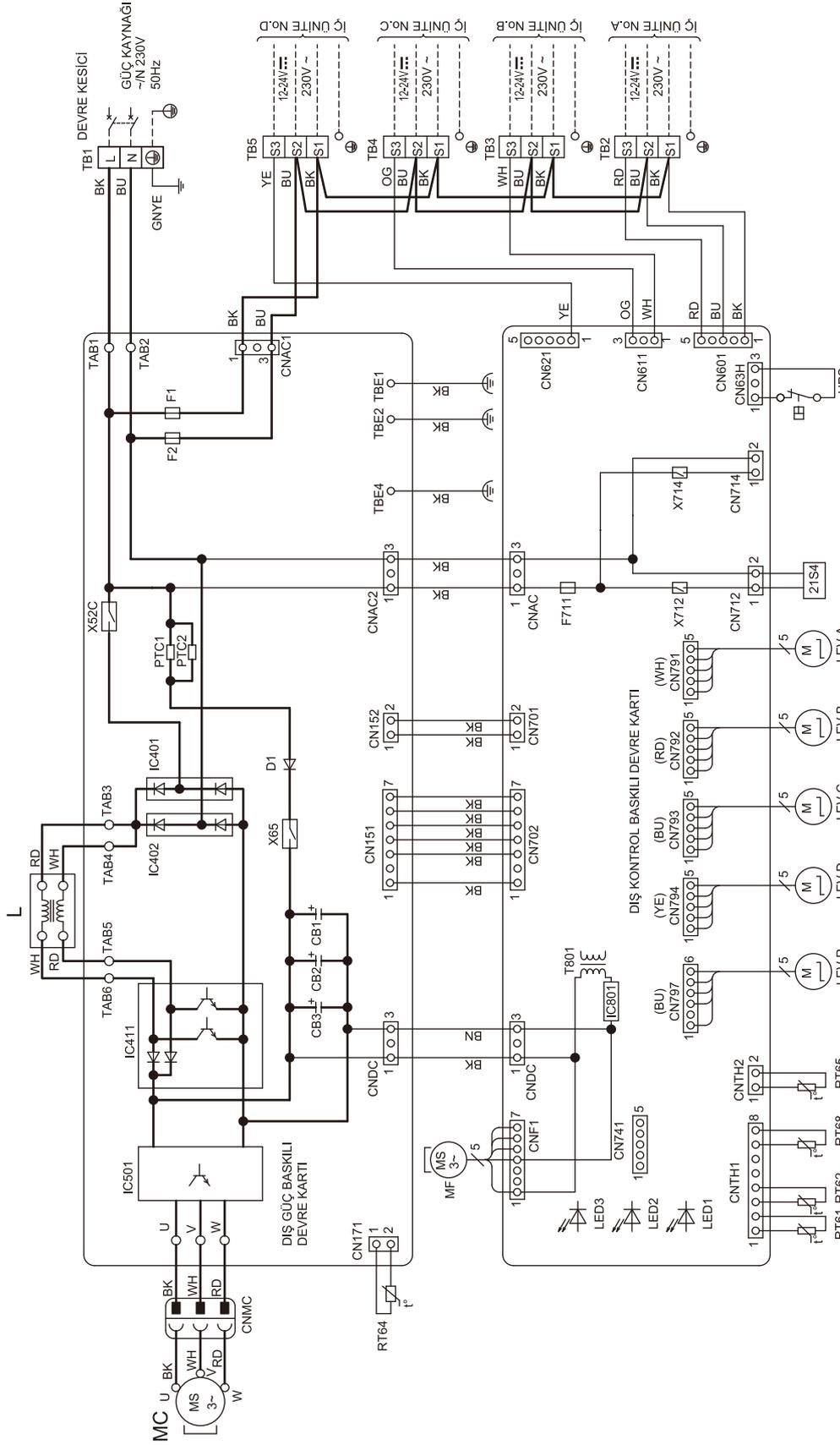
NOTES:  
 1.About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
 2.Use copper conductors only (For field wiring).  
 3.Symbols below indicate.  
 □:Terminal block  
 ○:Connector

MXZ-4F72VF2 - E1  
 MXZ-4F80VF2 - E1





**MXZ-4F72VF3 - ET1**  
**MXZ-4F80VF3 - ET1**



- NOTLAR:**
1. İç ünite elektrik devresine ilgili bakım için iç ünite elektrik devre şemasını referans alın.
  2. Sadece bakır kablolar kullanın (Saha elektrik devresi için).
  3. Sembollerin anlamı:  
  Klemens Grubu  
  Konnektör

SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI
CB1-3	KAPASİTÖR	IC401,402	DIYOT KÖPRÜSÜ	LEV A-D-R	LEV A-D-R
D1	DIYOT	IC411	GÜÇ FAKTÖRÜ DENETLEYİCİSİ	MC	KOMPRESÖR
F1	SİGORTA (T6.3AL250V)	IC501	GÜÇ MODÜLÜ	MF	FAN MOTORU
F2	SİGORTA (T6.3AL250V)	IC801	GÜÇ CİHAZI	PTC1,2	DEVRE KORUMASI
F711	SİGORTA (T3.15AL250V)	L	REAKTÖR	RT61	DEFROST TERMİSTÖRÜ
HPS	YÜKSEK BASINÇ SIVICI	LED1-3	LED	RT62	BASMA SICAKLIK TERMİSTÖRÜ
				RT64	GENLEŞME VANASI SARGISI
				RT65	ORTAM SICAKLIK TERMİSTÖRÜ
				RT66	DIŞ ÜNİTE ESANJÖR
				RT68	SICAKLIK TERMİSTÖRÜ
				T801	TRANSFORMATÖR
				TB1-5	KLEMENS GRUBU
				X52C	RÖLE
				X65	RÖLE
				X712	RÖLE
				X714	RÖLE
				21S4	SARGISI

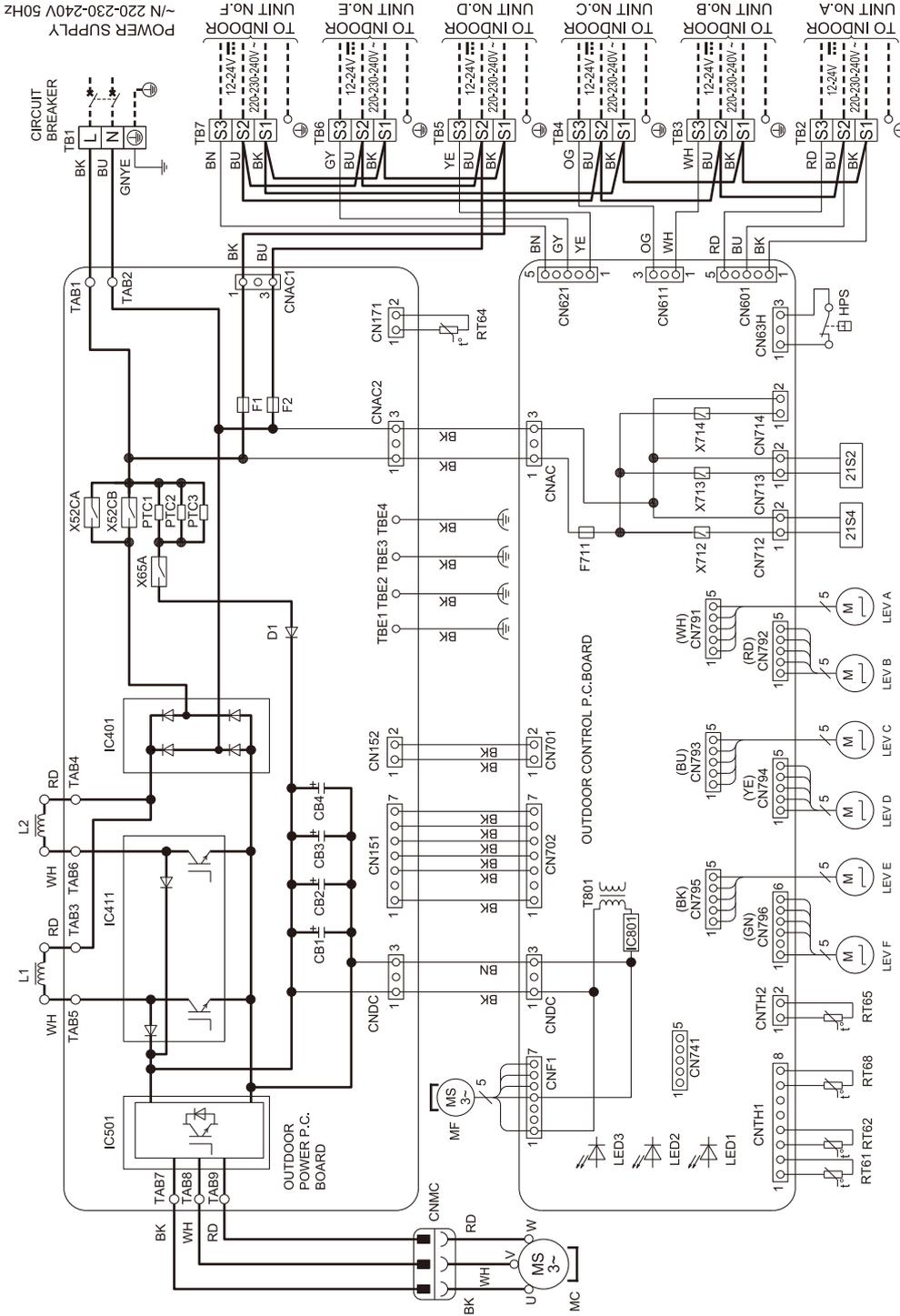








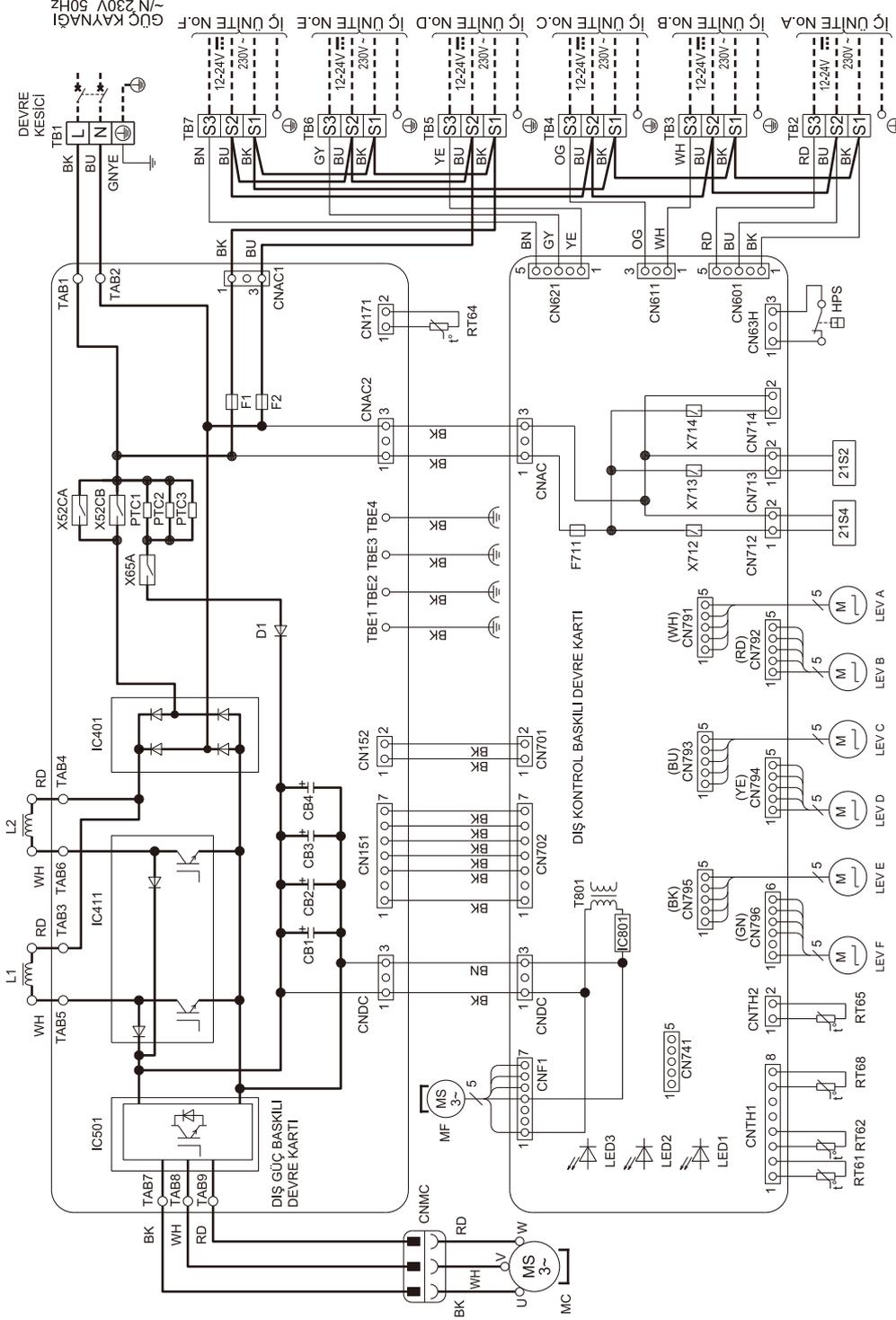
# MXZ-6F122VF - E1



- NOTES:**
1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.
  2. Use copper conductors only (For field wiring).
  3. Symbols below indicate.
    - □ □ □ : Terminal block
    - ○ ○ ○ : Connector

SYMBOL	NAME	SYMBOL	NAME
CB1-4	SMOOTHING CAPACITOR	RT61	DEFROST THERMISTOR
D1	DIODE	RT62	DISCHARGE TEMP.THERMISTOR
F1,F2	FUSE(T6.3AL250V)	RT64	FIN TEMP.THERMISTOR
F711	FUSE(T3.15AL250V)	RT65	AMBIENT TEMP.THERMISTOR
HPS	HIGH PRESSURE SWITCH	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
IC401	DIODE BRIDGE	T801	TRANSFORMER
IC501	POWER MODULE	TB1-7	TERMINAL BLOCK
IC801	POWER DEVICE	X52CA	RELAY
L1,L2	REACTOR	X65A	RELAY
LED1-3	LED	X712	RELAY
LEV A-F	EXPANSION VALVE COIL	X713	RELAY
MC	COMPRESSOR	X714	RELAY
MF	FAN MOTOR	21S2	2WAY VALVE SOLENOID COIL
PTC1-3	CIRCUIT PROTECTOR	21S4	REVERSING VALVE SOLENOID COIL

# MXZ-6F122VF - [ET1]

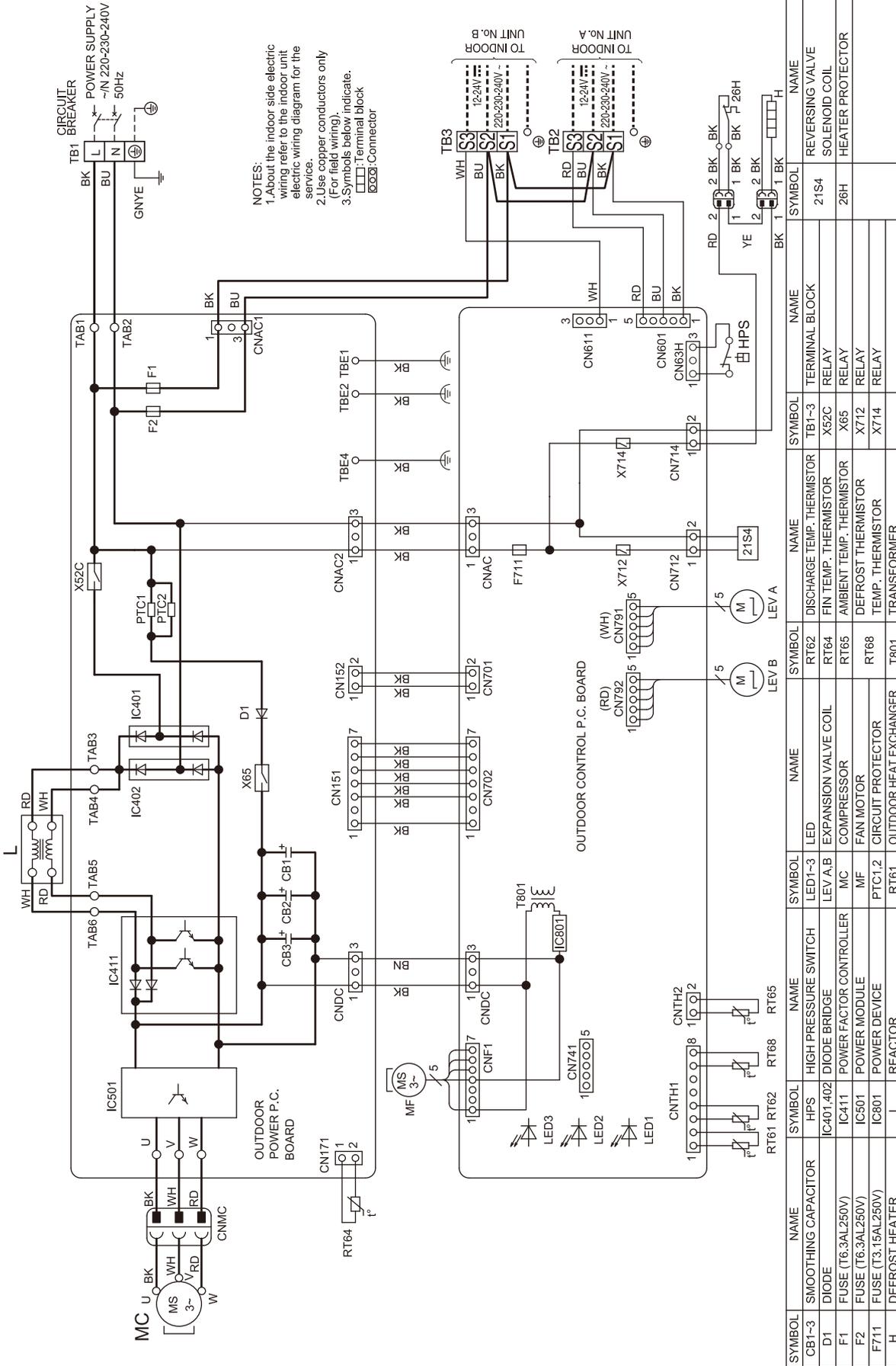


### NOTLAR:

1. İç ünite elektrik devresiyle ilgili bakım için iç ünite elektrik devre şemasını referans alın.
2. Sadece bakır kablolar kullanın (Saha elektrik devresi için).
3. Sembollerin anlamı:  
 :Klemens Grubu  
 :Konnektör

SEMBOLE	PARÇA ADI	SEMBOLE	PARÇA ADI
CB1-4	KAPASİTÖR	RT61	DEFROST TERMİSTÖRÜ
D1	DIYOT	RT62	BASMA SICAKLIK TERMİSTÖRÜ
F1,F2	SİGORTA (T6,3AL250V)	RT64	FIN SICAKLIK TERMİSTÖRÜ
F711	SİGORTA (T3,15AL250V)	RT65	ORTAM SICAKLIK TERMİSTÖRÜ
HPS	YÜKSEK BASINÇ SIVICI	RT68	DIŞ ÜNİTE EŞANJÖR SICAKLIK TERMİSTÖRÜ
IC401	DIYOT KÖPRÜSÜ	T801	TRANSFORMATÖR
IC411	GUÇ FAKTÖRÜ DENETLEYİCİSİ	TB1-7	KLEMENS GRUBU
IC501	GUÇ MODÜLÜ	X52CA,B	ROLE
IC801	GUÇ CIHAZI	X65A	ROLE
L1,L2	REAKTÖR	X712	ROLE
LEV1-3	LED	X713	ROLE
LEV A-F	GENLEŞME VANASI SARGISI	X714	ROLE
MC	KOMPRESÖR	21S2	2 YÖNLÜ VANA SELENOİD SARGISI
MF	FAN MOTORU	21S4	İKİ YÖNLÜ VANA SELENOİD SARGISI
PTC1-3	DEVRE KORUMASI		

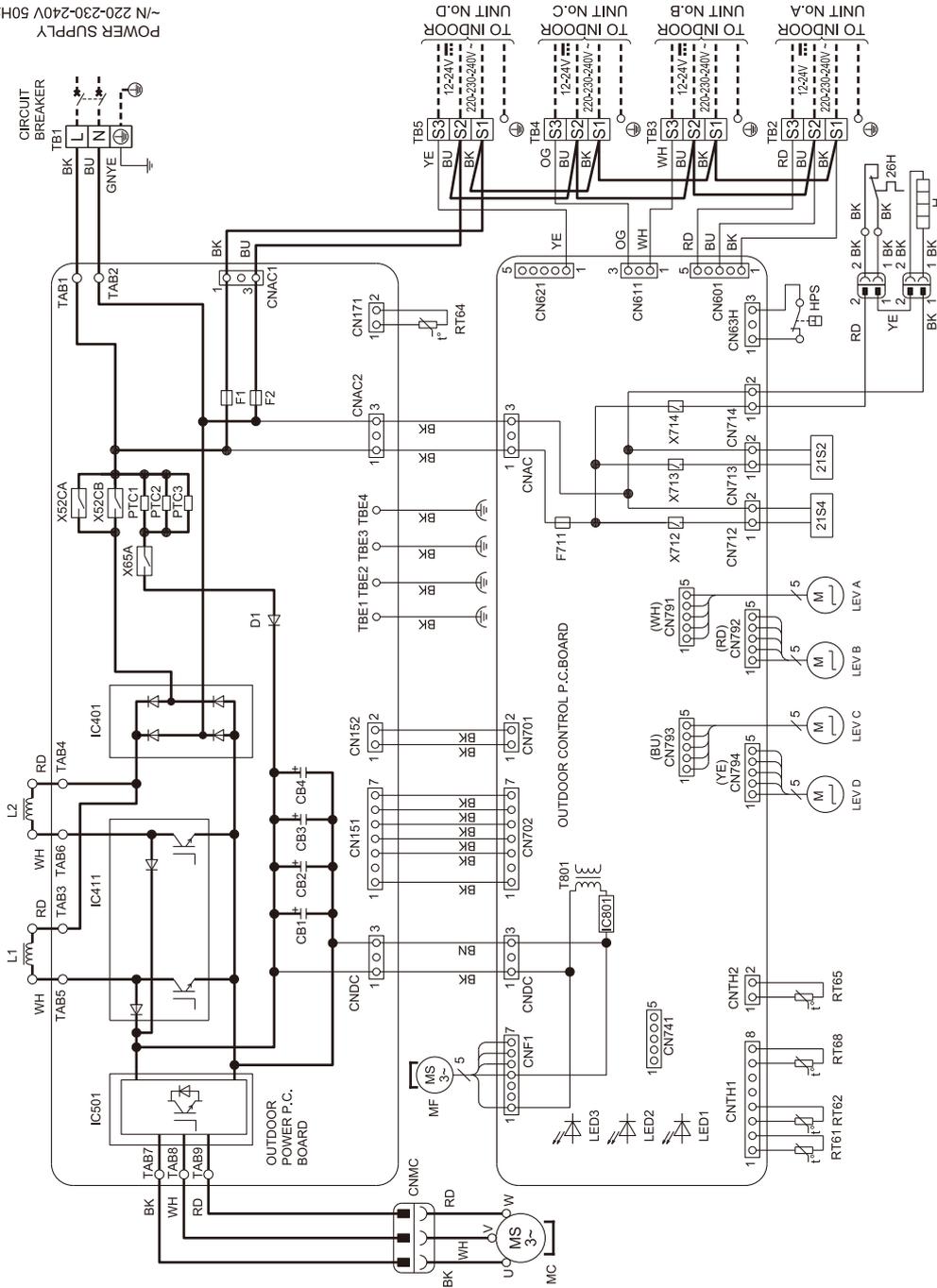
MXZ-2F53VFHZ - E1



# MXZ-4F83VFHZ

E1

POWER SUPPLY  
~N 220-230-240V 50Hz



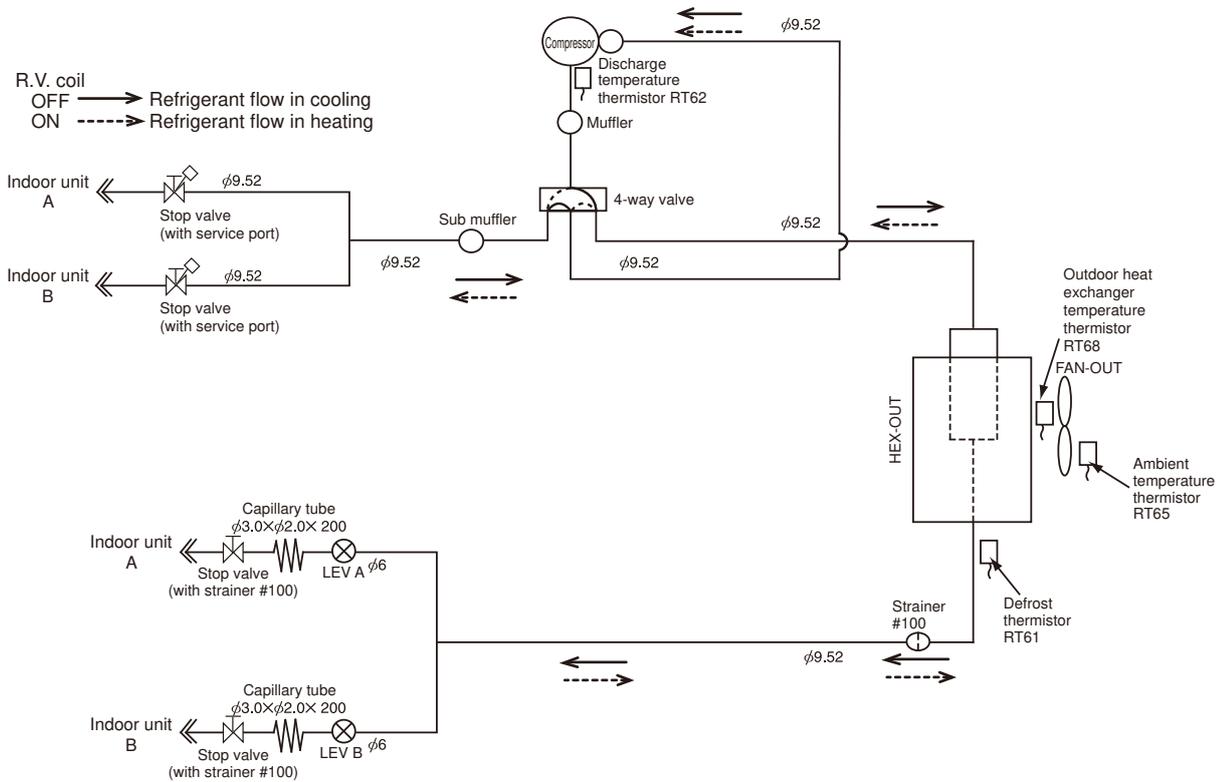
NOTES:  
1. About the indoor side electric wiring refer to the indoor unit electric wiring diagram for the service.  
2. Use copper conductors only (For field wiring).  
3. Symbols below indicate.

- : Terminal block
- : Connector

SYMBOL	NAME	SYMBOL	NAME
CB1~4	SMOOTHING CAPACITOR	RT61	DEFROST THERMISTOR
D1	DIODE	RT62	DISCHARGE TEMP.THERMISTOR
F1,F2	FUSE(T6.3AL250V)	RT64	FIN TEMP.THERMISTOR
F711	FUSE(T3.15AL250V)	RT65	AMBIENT TEMP.THERMISTOR
H	DEFROST HEATER	RT68	OUTDOOR HEAT EXCHANGER
HPS	HIGH PRESSURE SWITCH		TEMP. THERMISTOR
IC401	DIODE BRIDGE	T801	TRANSFORMER
IC501	POWER MODULE	X52CAB	TERMINAL BLOCK
IC801	POWER DEVICE	X65A	RELAY
L1,L2	REACTOR	X712	RELAY
LED1~3	LED	X713	RELAY
LEV A-D	EXPANSION VALVE COIL	X714	RELAY
MC	COMPRESSOR	21S2	2WAY VALVE SOLENOID COIL
MF	FAN MOTOR	21S4	REVERSING VALVE SOLENOID COIL
PTCT~3	CIRCUIT PROTECTOR	26H	HEATER PROTECTOR

**MXZ-2F33VF**  
**MXZ-2F33VF2**  
**MXZ-2F33VF3**

Unit: mm



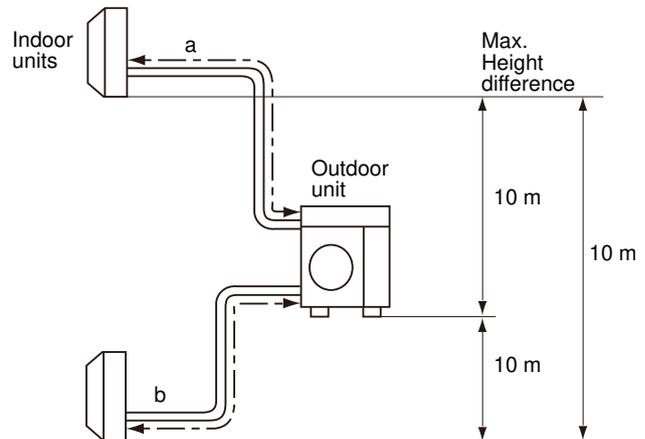
### MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b)	15 m
Total piping length (a+b)	20 m
Bending point for each unit	15
Total bending point	20

\*It is irrelevant which unit is higher.

### ADDITIONAL REFRIGERANT CHARGE

Model name	Outdoor unit precharged (g)	Refrigerant piping length (one way, 2 unit total)
		20 m
<b>MXZ-2F33VF</b> <b>MXZ-2F33VF2</b>	1,000	0
<b>MXZ-2F33VF3</b>	800	0



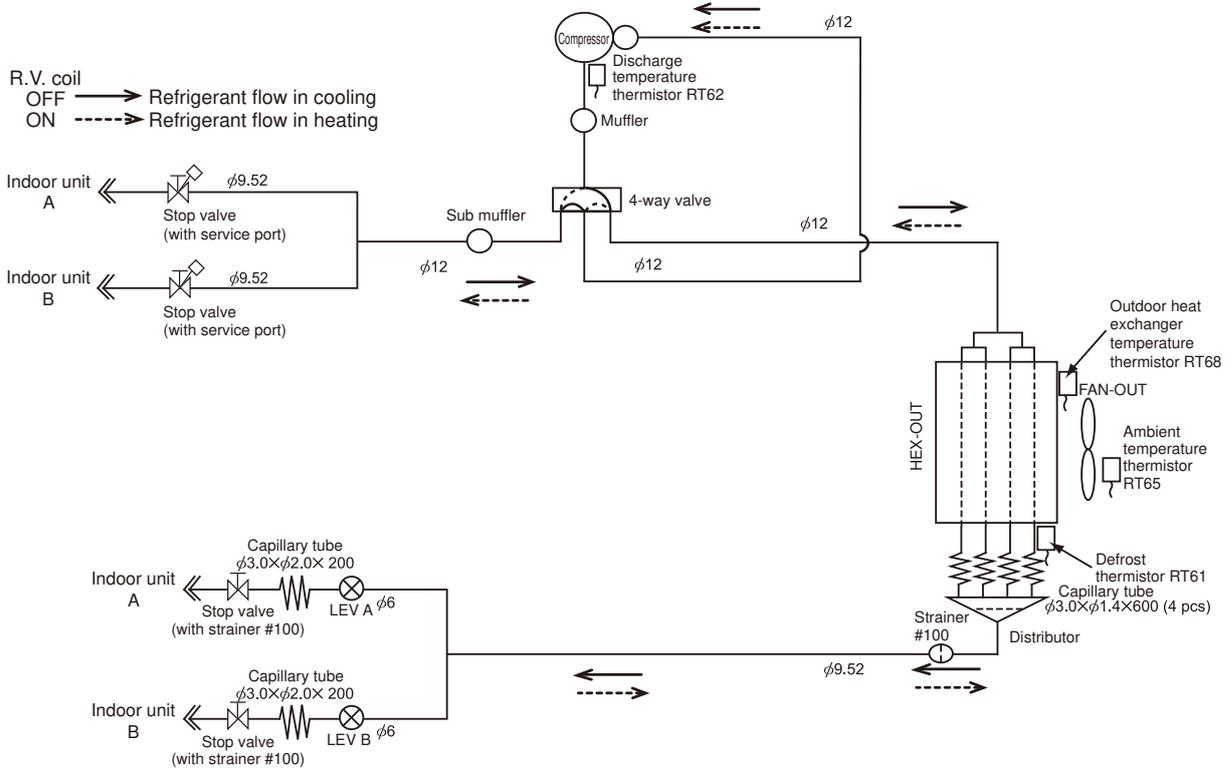
Unit: mm (inch)

● Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)

**MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH**  
**MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2**  
**MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3**

Unit: mm



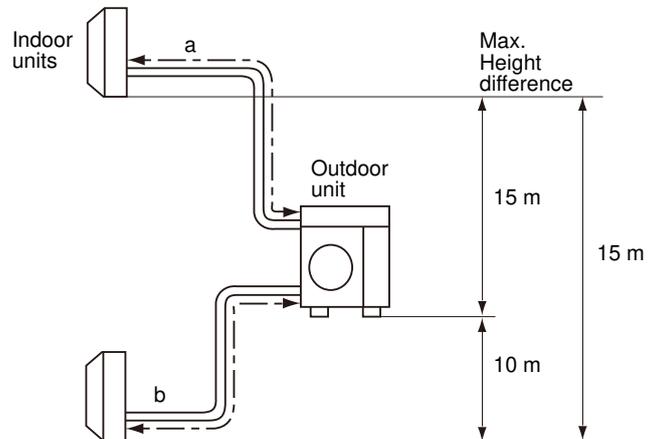
**MAX REFRIGERANT PIPING LENGTH**

Piping length each indoor unit (a, b)	20 m
Total piping length (a+b)	30 m
Bending point for each unit	30
Total bending point	20

\*It is irrelevant which unit is higher.

**ADDITIONAL REFRIGERANT CHARGE**

Model name	Outdoor unit precharged (g)	Refrigerant piping length (one way, 2 unit total)
		30 m
<b>MXZ-2F42/53VF</b> <b>MXZ-2F53VFH</b> <b>MXZ-2F42/53VF2</b> <b>MXZ-2F53VFH2</b>	1,200	0
<b>MXZ-2F42/53VF3</b> <b>MXZ-2F53VFH3</b>	1,000	0



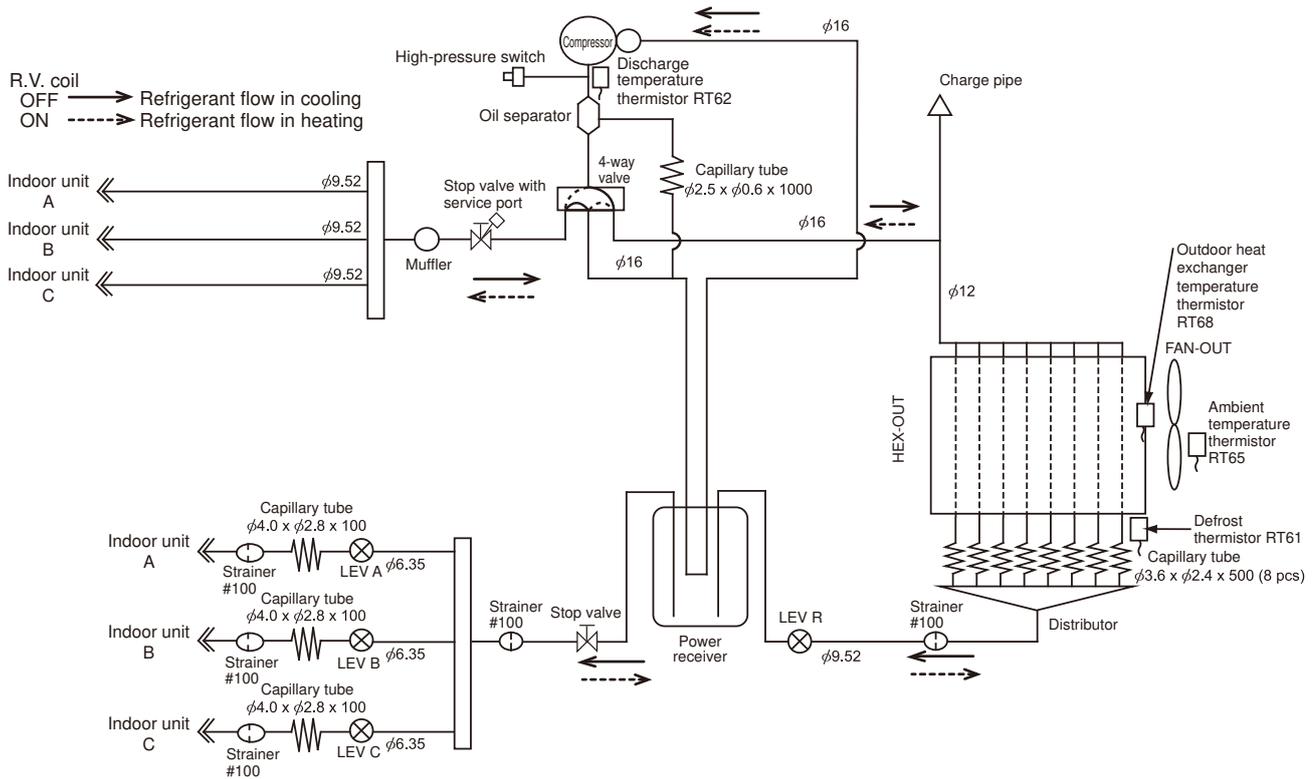
Unit: mm (inch)

- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- For **MXZ-2F53VF**, **MXZ-2F53VF2**, **MXZ-2F53VF3**, **MXZ-2F53VFH**, **MXZ-2F53VFH2** and **MXZ-2F53VFH3** when diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)

**MXZ-3F54VF MXZ-3F54VF2 MXZ-3F54VF3**

Unit: mm



**MAX REFRIGERANT PIPING LENGTH**

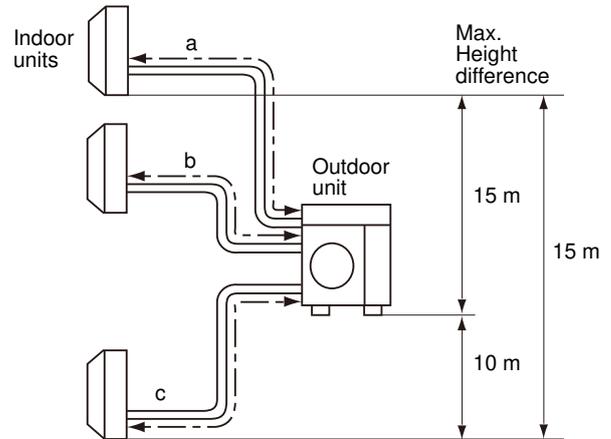
Piping length each indoor unit (a, b, c)	25 m
Total piping length (a+b+c)	50 m
Bending point for each unit	25
Total bending point	50

\*It is irrelevant which unit is higher.

**ADDITIONAL REFRIGERANT CHARGE**

\*Refer to "Method of charging refrigerant".

Model name	Outdoor unit precharged (g)	Refrigerant piping length (one way, 3 unit total)
		50 m
<b>MXZ-3F54VF</b>	1,400	0
<b>MXZ-3F54VF2</b> <b>MXZ-3F54VF3</b>	2,400	0



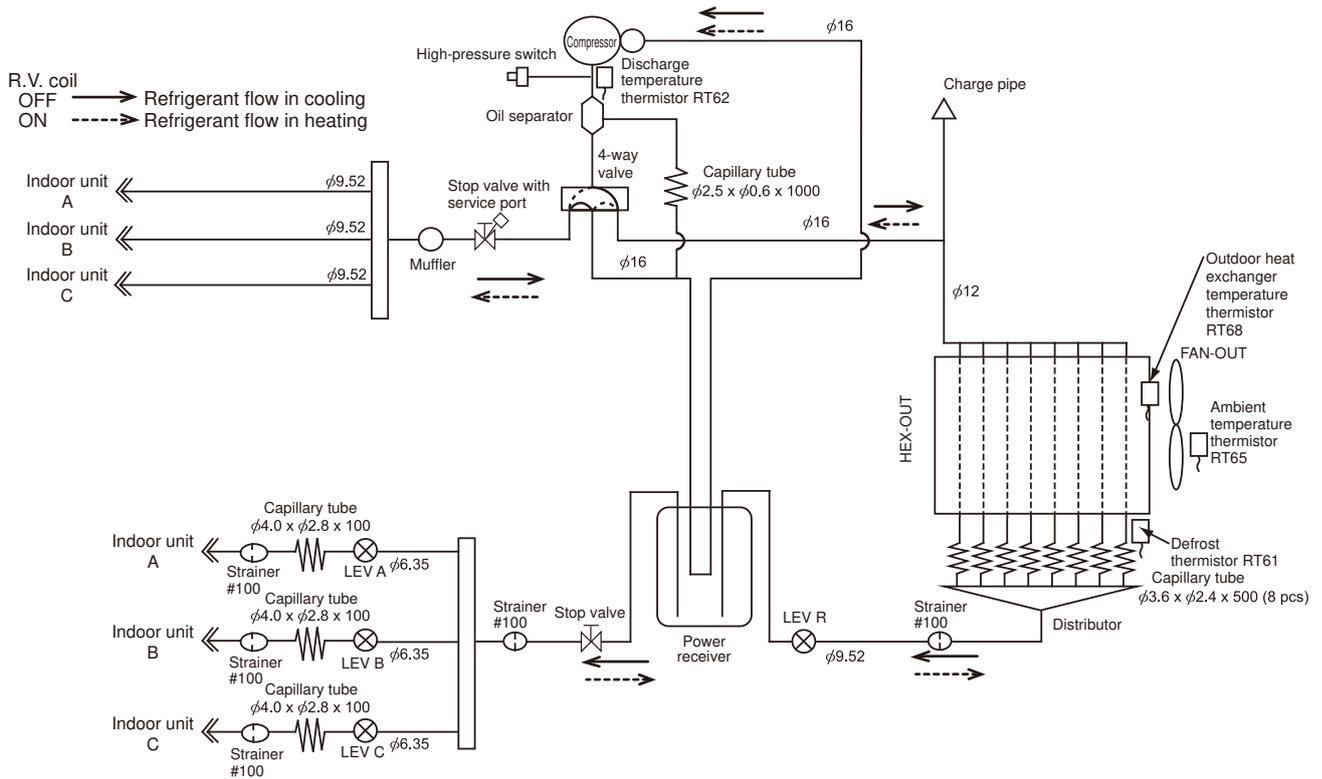
Unit: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)

- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

**MXZ-3F68VF MXZ-3F68VF2 MXZ-3F68VF3**

Unit: mm



**MAX REFRIGERANT PIPING LENGTH**

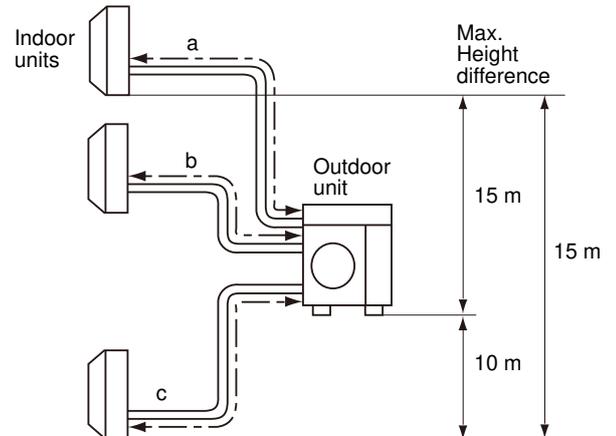
Piping length each indoor unit (a, b, c)	25 m
Total piping length (a+b+c)	60 m
Bending point for each unit	25
Total bending point	60

\*It is irrelevant which unit is higher.

**ADDITIONAL REFRIGERANT CHARGE**

\*Refer to "Method of charging refrigerant".

Model name	Outdoor unit precharged (g)	Refrigerant piping length (one way, 3 unit total)
		60 m
<b>MXZ-3F68VF</b>	1,400	0
<b>MXZ-3F68VF2 MXZ-3F68VF3</b>	2,400	0



- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

Unit: mm (inch)

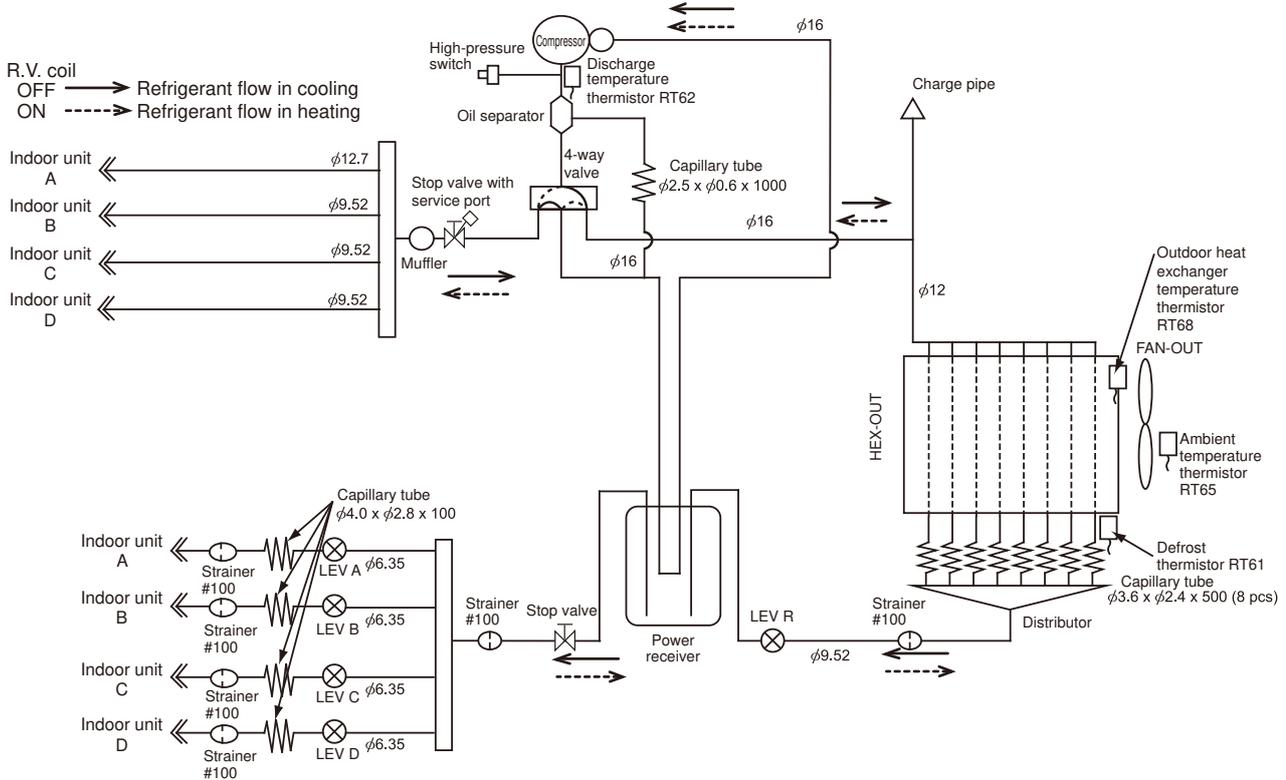
Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)

**MXZ-4F72VF**

**MXZ-4F72VF2  
MXZ-4F80VF2**

**MXZ-4F72VF3  
MXZ-4F80VF3**

Unit: mm



**MAX REFRIGERANT PIPING LENGTH**

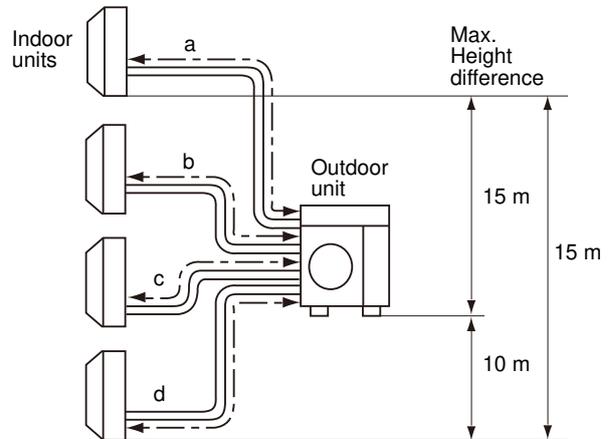
Piping length each indoor unit (a, b, c, d)	25 m
Total piping length (a+b+c+d)	60 m
Bending point for each unit	25
Total bending point	60

\*It is irrelevant which unit is higher.

**ADDITIONAL REFRIGERANT CHARGE**

\*Refer to "Method of charging refrigerant".

Model name	Outdoor unit precharged (g)	Refrigerant piping length (one way, 4 unit total)
<b>MXZ-4F72VF</b>	1,400	60 m
<b>MXZ-4F72VF2 MXZ-4F72VF3 MXZ-4F80VF2 MXZ-4F80VF3</b>	2,400	0



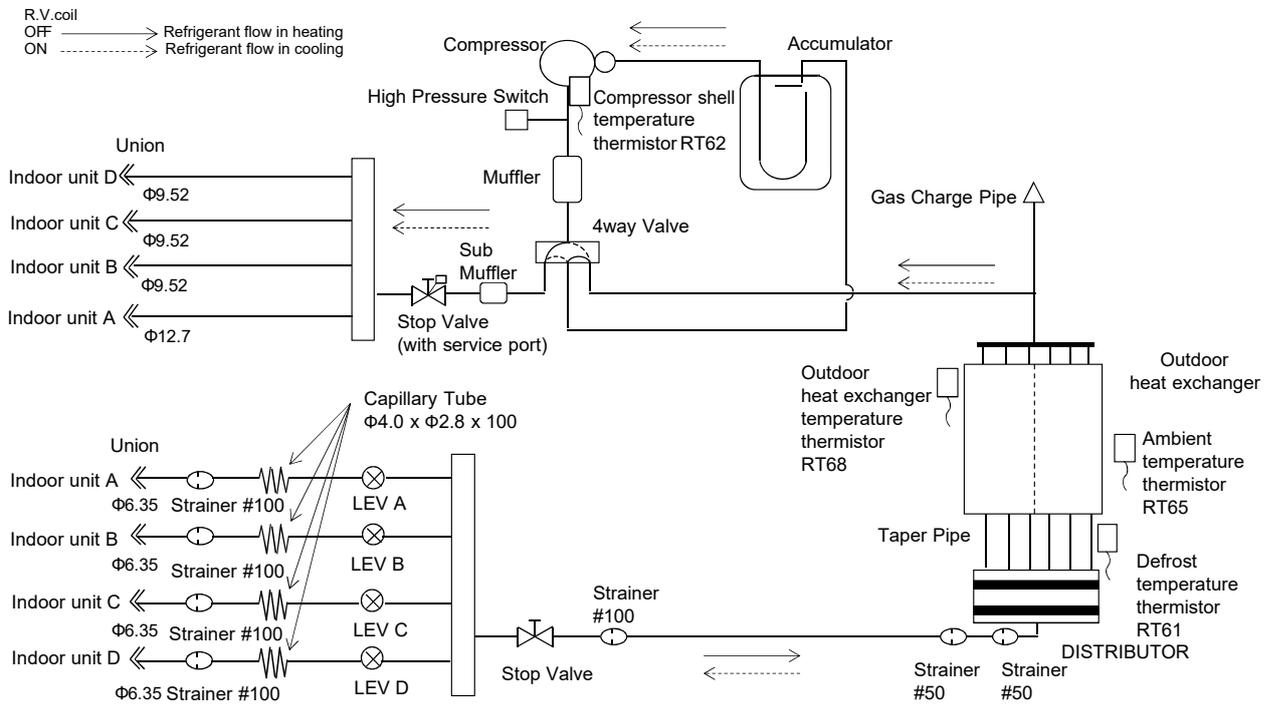
Unit: mm (inch)

- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the right table.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	12.7(1/2)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit D	Liquid	6.35(1/4)
	Gas	9.52(3/8)

# MXZ-4F83VF

UNIT: mm



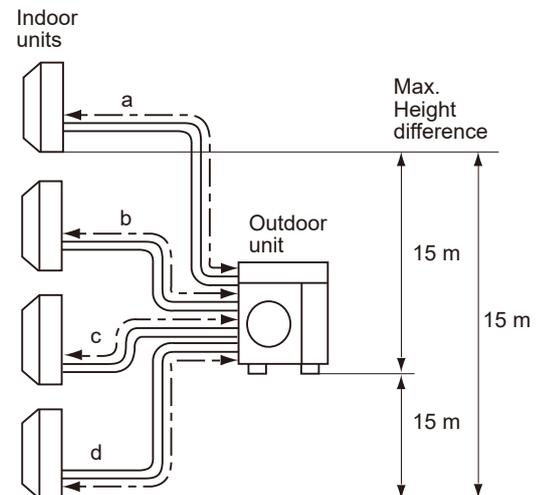
## MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b, c, d)	25 m
Total piping length (a+b+c+d)	70 m
Bending point for each unit	25
Total bending point	70

\*It is irrelevant which unit is higher.

## ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 4 units total)	
		70 m
2,400		0



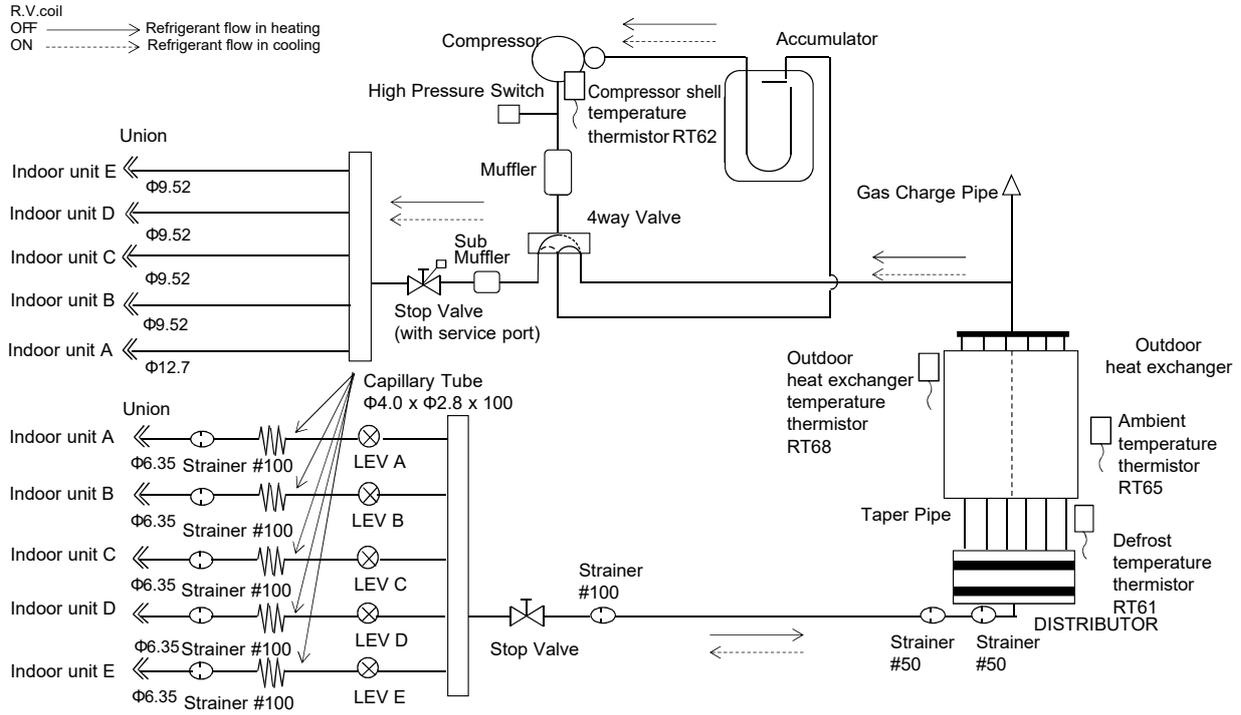
- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the tables below.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	12.7(1/2)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit D	Liquid	6.35(1/4)
	Gas	9.52(3/8)

**MXZ-5F102VF**

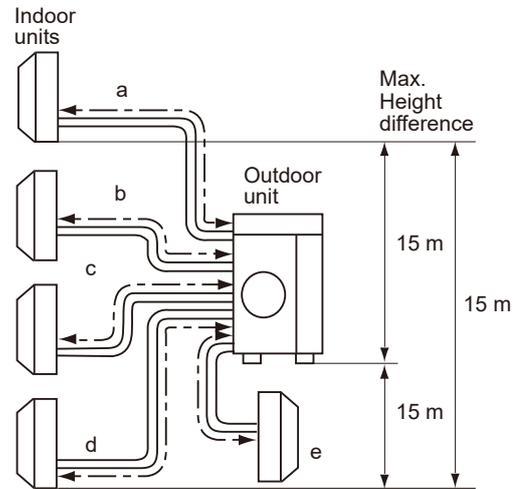
**UNIT: mm**



**MAX REFRIGERANT PIPING LENGTH**

Piping length each indoor unit (a, b, c, d, e)	25 m
Total piping length (a+b+c+d+e)	80 m
Bending point for each unit	25
Total bending point	80

\*It is irrelevant which unit is higher.



**ADDITIONAL REFRIGERANT CHARGE**

Outdoor unit precharged (g)	Refrigerant piping length (one way, 5 units total)
	80 m
2,400	0

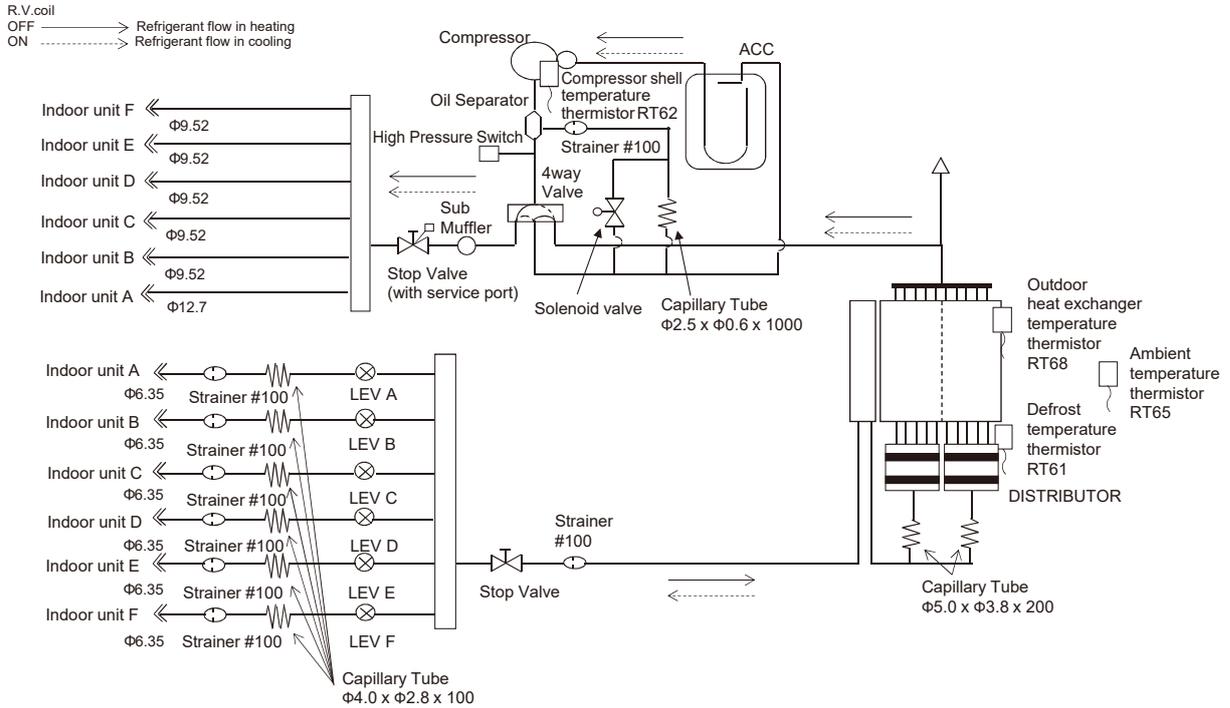
- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the tables below.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

**UNIT: mm (inch)**

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	12.7(1/2)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit D	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit E	Liquid	6.35(1/4)
	Gas	9.52(3/8)

# MXZ-6F122VF

UNIT: mm



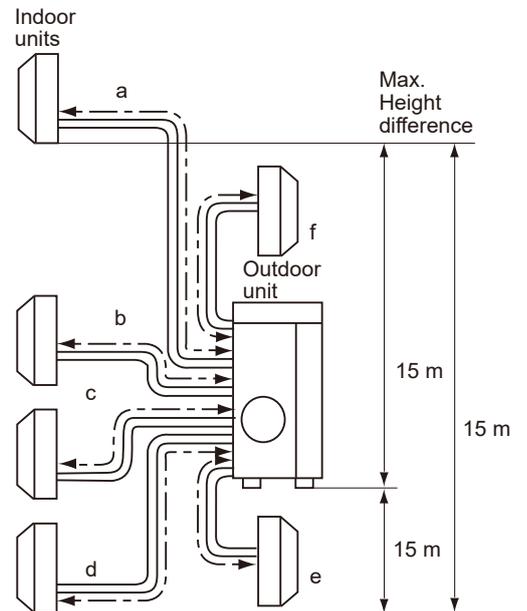
## MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b, c, d, e, f)	25 m
Total piping length (a+b+c+d+e+f)	80 m
Bending point for each unit	25
Total bending point	80

\*It is irrelevant which unit is higher.

## ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 6 units total)	
	80 m	0
2,400		



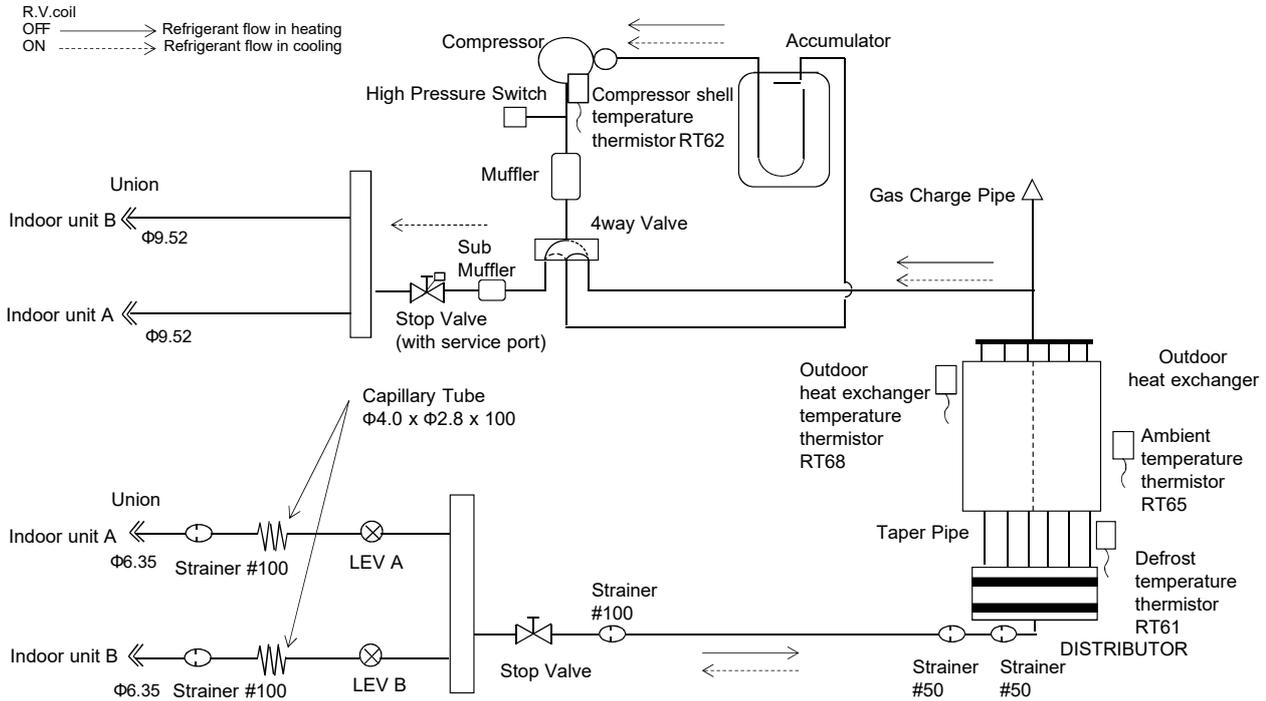
- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the tables below.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter			Outdoor unit union diameter		
For			For		
Indoor unit A	Liquid	6.35(1/4)	Indoor unit D	Liquid	6.35(1/4)
	Gas	12.7(1/2)		Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)	Indoor unit E	Liquid	6.35(1/4)
	Gas	9.52(3/8)		Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)	Indoor unit F	Liquid	6.35(1/4)
	Gas	9.52(3/8)		Gas	9.52(3/8)

# MXZ-2F53VFHZ

UNIT: mm



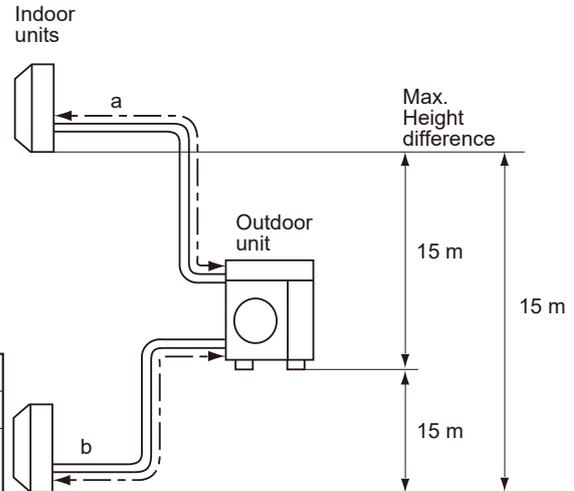
## MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b)	20 m
Total piping length (a+b)	30 m
Bending point for each unit	20
Total bending point	30

\*It is irrelevant which unit is higher.

## ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 2 units total)	
		30 m
2,400		0



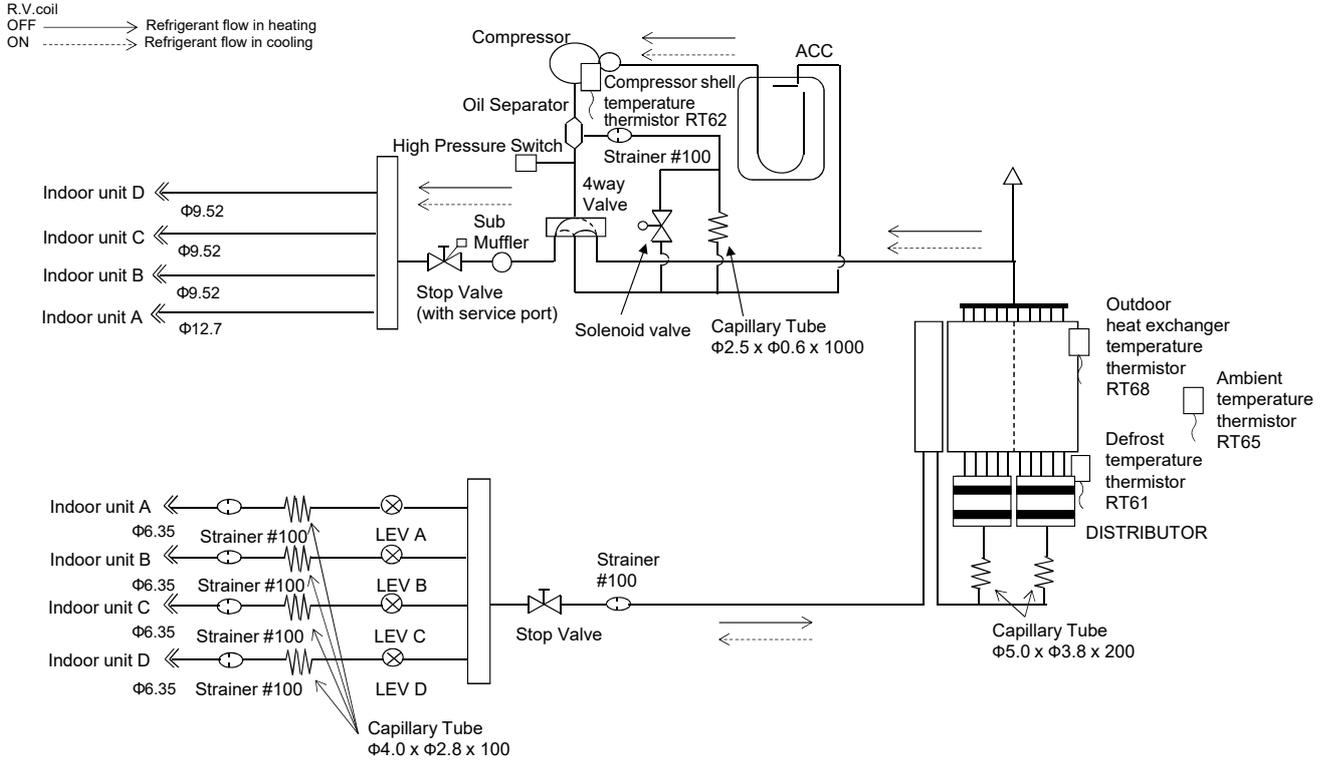
- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the tables below.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)

# MXZ-4F83VFHZ

UNIT: mm



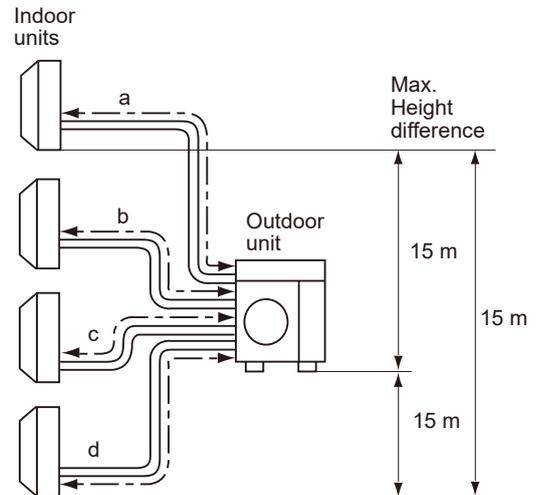
## MAX REFRIGERANT PIPING LENGTH

Piping length each indoor unit (a, b, c, d)	25 m
Total piping length (a+b+c+d)	70 m
Bending point for each unit	25
Total bending point	70

\*It is irrelevant which unit is higher.

## ADDITIONAL REFRIGERANT CHARGE

Outdoor unit precharged (g)	Refrigerant piping length (one way, 4 units total)	
		70 m
2,400		0



- Refrigerant pipe diameter is different according to indoor unit to be connected. When using extension pipes, refer to the tables below.
- When diameter of refrigerant pipe is different from that of outdoor unit union, use optional Different-diameter pipe. For further information on Different-diameter pipe, refer to "PARTS CATALOG".

UNIT: mm (inch)

Outdoor unit union diameter		
For		
Indoor unit A	Liquid	6.35(1/4)
	Gas	12.7(1/2)
Indoor unit B	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit C	Liquid	6.35(1/4)
	Gas	9.52(3/8)
Indoor unit D	Liquid	6.35(1/4)
	Gas	9.52(3/8)

## Method of Charging refrigerant

### ■MXZ-3F54VF/3F68VF/4F72VF

Total refrigerant *3	=	Pre charge	+	Indoor unit number *1	+	Connection of specific I/U *2	+	Piping length
_____ kg		1.4 kg		_____ kg		_____ kg		0.0 kg

### ■MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2

Total refrigerant	=	Pre charge	+		+	Piping length
2.4 kg		2.4 kg				0.0 kg

### ■MXZ-2F42VF/2F53VF/2F53VFH

### ■MXZ-2F42VF2/2F53VF2/2F53VFH2

Total refrigerant	=	Pre charge	+		+	Piping length
1.2 kg		1.2 kg				0.0 kg

### ■MXZ-2F42VF3/2F53VF3/2F53VFH3

Total refrigerant	=	Pre charge	+		+	Piping length
1.0 kg		1.0 kg				0.0 kg

### ■MXZ-2F33VF

### ■MXZ-2F33VF2

Total refrigerant	=	Pre charge	+		+	Piping length
1.0 kg		1.0 kg				0.0 kg

### ■MXZ-2F33VF3

Total refrigerant	=	Pre charge	+		+	Piping length
0.8 kg		0.8 kg				0.0 kg

\*1 If you connect indoor unit number 3 or 4 units, please add to charge refrigerant amount **0.5kg**

\*2 If you connect specific indoor unit(s), please add to charge refrigerant amount **0.17kg per 1unit**

Specific indoor unit is following: MSZ-LN18/25/35VG MLZ-KP25/35/50VF

SEZ-M50DA(L) PCA-M50/60KA

PEAD-M50JA(L)

\*3 In case total refrigerant amount exceed **2.4kg** depending on combination, please charge only **1.0kg** for maximum.

## PUMPING DOWN

When relocating or disposing of the air conditioner, pump down the system following the procedure below so that no refrigerant is released into the atmosphere.

- 1) Turn off the breaker.
- 2) Connect the gauge manifold valve to the service port of the stop valve on the gas pipe side of the outdoor unit.
- 3) Fully close the stop valve on the liquid pipe side of the outdoor unit.
- 4) Turn on the breaker.
- 5) Start the emergency COOL operation on all the indoor units.
- 6) When the pressure gauge shows 0.05 to 0 MPa [Gauge] (approximately 0.5 to 0 kgf/cm<sup>2</sup>), fully close the stop valve on the gas pipe side of the outdoor unit and stop the operation. (Refer to the indoor unit installation manual about the method for stopping the operation.)
- \* If too much refrigerant has been added to the air conditioner system, the pressure may not drop to 0.05 to 0 MPa [Gauge] (approximately 0.5 to 0 kgf/cm<sup>2</sup>), or the protection function may operate due to the pressure increase in the high pressure refrigerant circuit. If this occurs, use a refrigerant collecting device to collect all of the refrigerant in the system, and then recharge the system with the correct amount of refrigerant after the indoor and outdoor units have been relocated.
- 7) Turn off the breaker. Remove the pressure gauge and the refrigerant piping.

### WARNING

When pumping down the refrigerant, stop the compressor before disconnecting the refrigerant pipes. The compressor may burst and cause injury if any foreign substance, such as air, enters the pipes.

- |                     |                     |                    |                     |
|---------------------|---------------------|--------------------|---------------------|
| <b>MXZ-2F33VF</b>   | <b>MXZ-2F42VF</b>   | <b>MXZ-2F53VF</b>  | <b>MXZ-2F53VFH</b>  |
| <b>MXZ-2F33VF2</b>  | <b>MXZ-2F42VF2</b>  | <b>MXZ-2F53VF2</b> | <b>MXZ-2F53VFH2</b> |
| <b>MXZ-2F33VF3</b>  | <b>MXZ-2F42VF3</b>  | <b>MXZ-2F53VF3</b> | <b>MXZ-2F53VFH3</b> |
| <b>MXZ-3F54VF</b>   | <b>MXZ-3F68VF</b>   | <b>MXZ-4F72VF</b>  |                     |
| <b>MXZ-3F54VF2</b>  | <b>MXZ-3F68VF2</b>  | <b>MXZ-4F72VF2</b> | <b>MXZ-4F80VF2</b>  |
| <b>MXZ-3F54VF3</b>  | <b>MXZ-3F68VF3</b>  | <b>MXZ-4F72VF3</b> | <b>MXZ-4F80VF3</b>  |
| <b>MXZ-4F83VF</b>   | <b>MXZ-5F102VF</b>  | <b>MXZ-6F122VF</b> |                     |
| <b>MXZ-2F53VFHZ</b> | <b>MXZ-4F83VFHZ</b> |                    |                     |

The standard specifications apply only to the operation of the air conditioner under normal conditions. Since operating conditions vary according to the areas where these units are installed, the following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

**(1) GUARANTEED VOLTAGE**

198 - 264 V 50 Hz

**(2) AIR FLOW**

Air flow should be set at MAX.

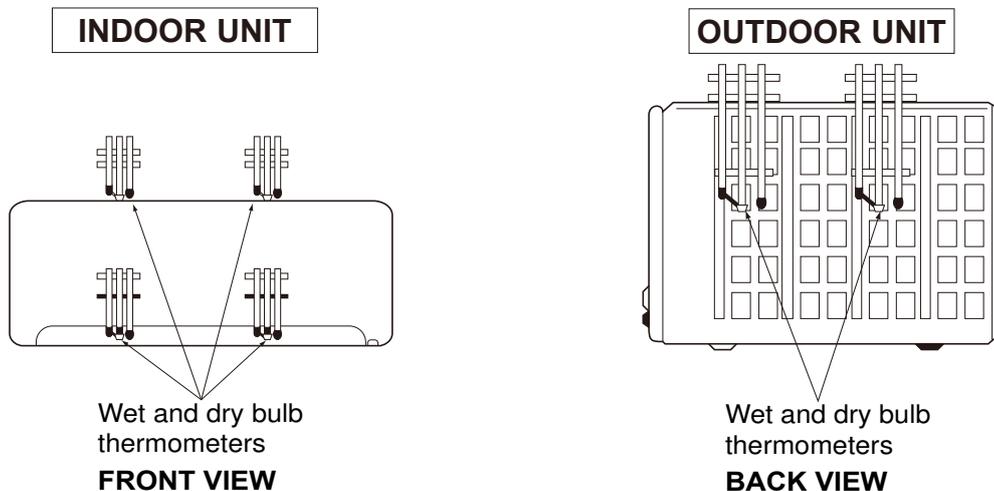
**(3) MAIN READINGS**

- |  |      |           |
|--|------|-----------|
| (1) Indoor intake air wet-bulb temperature:  | °CWB | } Cooling |
| (2) Indoor outlet air wet-bulb temperature:  | °CWB |           |
| (3) Outdoor intake air dry-bulb temperature: | °CDB |           |
| (4) Total input:                             | W    | } Heating |
| (5) Indoor intake air dry-bulb temperature:  | °CDB |           |
| (6) Outdoor intake air wet-bulb temperature: | °CWB |           |
| (7) Total input:                             | W    |           |

Indoor air wet and dry bulb temperature difference on the left side of the following chart shows the difference between the indoor intake air wet and dry bulb temperature and the indoor outlet air wet and dry bulb temperature for your reference at service.

**How to measure the indoor air wet and dry bulb temperature difference**

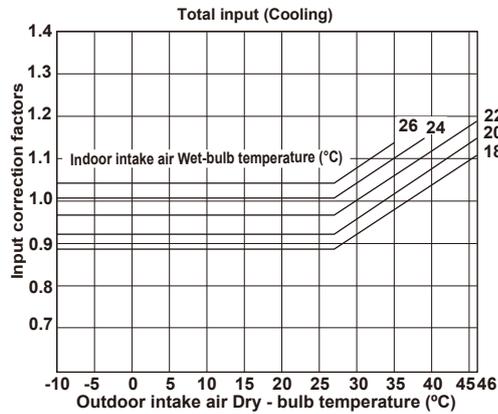
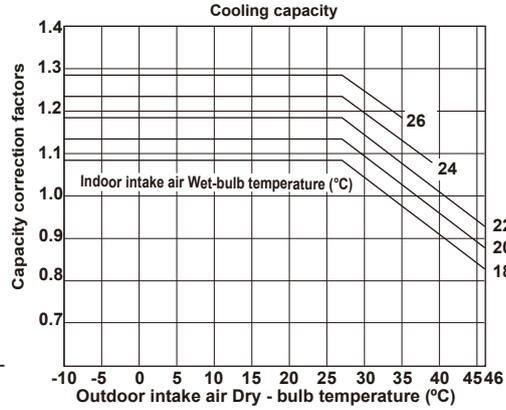
1. Attach at least 2 sets of wet and dry bulb thermometers to the indoor air intake as shown in the figure, and at least 2 sets of wet and dry bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
2. Attach at least 2 sets of wet and dry bulb thermometers to the outdoor air intake. Cover the thermometers to prevent direct rays of the sun.
3. Check that the air filter is cleaned.
4. Open windows and doors of room.
5. Press the EMERGENCY OPERATION switch once (twice) to start the EMERGENCY COOL (HEAT) MODE.
6. When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
7. 10 minutes later, measure temperature again and check that the temperature does not change.



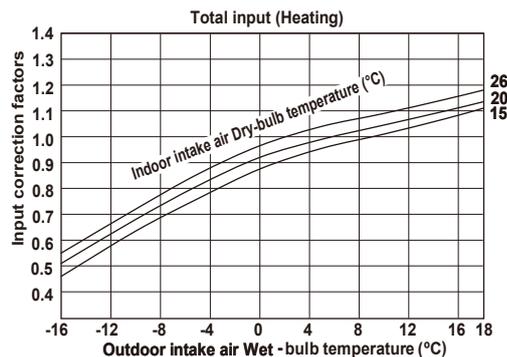
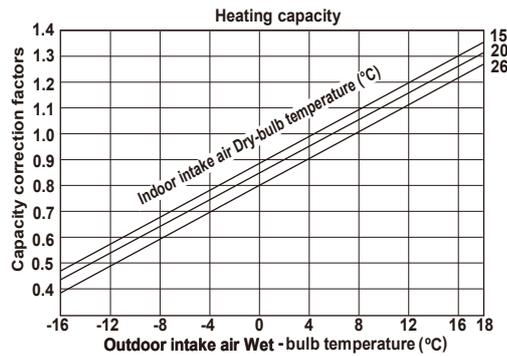
## 9-1. CAPACITY AND THE INPUT CURVES

MXZ-2F33VF    MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH  
 MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2  
 MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3

5.8	4.1	7.4	5.2	5.9	8.7	11.1	12.8
5.4	3.8	6.8	4.8	5.5	8.0	10.2	11.6
4.9	3.5	6.2	4.4	5.0	7.3	9.3	10.5
4.5	3.2	5.7	4.0	4.6	6.6	8.3	9.5
4.0	2.9	5.1	3.6	4.1	5.9	7.5	8.5
3.6	2.6	4.5	3.2	3.7	5.3	6.6	7.5
3.2	2.3	4.0	2.8	3.2	4.6	5.8	6.6
2.8	2.0	3.5	2.4	2.8	4.0	5.0	5.6
15 class	18 class	20 class	22 class	25 class	35 class (MXZ-2F42VF)	42 class (MXZ-2F53)	50 class (MXZ-2F53)

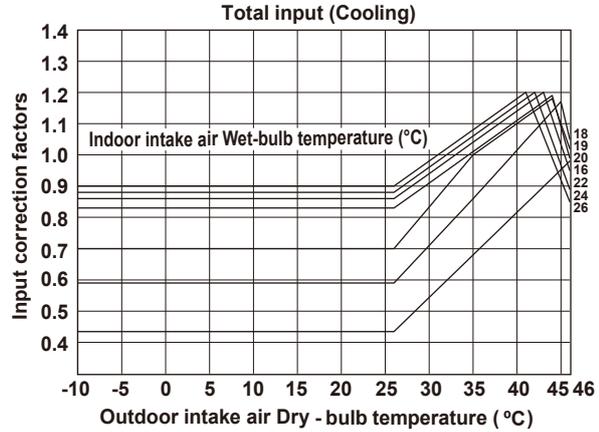
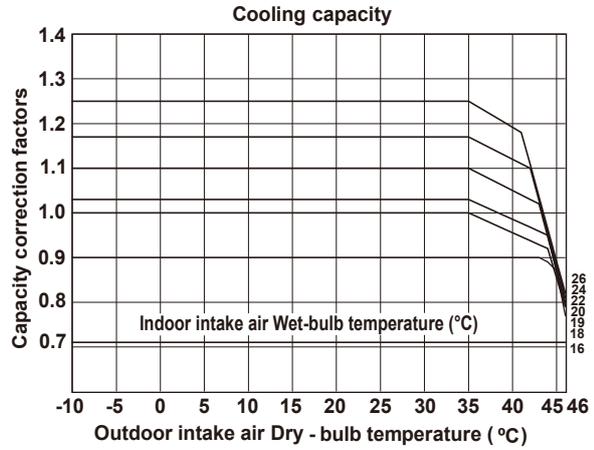


17.6	19.5	21.2	19.5	21.3	22.2	26.6	26.7
16.3	18.1	19.7	18.1	19.8	20.6	24.7	24.8
15.1	16.7	18.2	16.7	18.3	19.0	22.8	22.9
13.8	15.3	16.7	15.3	16.7	17.4	20.9	21.0
12.6	13.9	15.2	13.9	15.2	15.8	19.0	19.1
11.3	12.6	13.6	12.6	13.7	14.3	17.1	17.1
10.1	11.2	12.1	11.2	12.2	12.7	15.2	15.2
8.8	9.8	10.6	9.8	10.7	11.1	13.3	13.3
7.5	8.4	9.1	8.4	9.1	9.5	11.4	11.4
6.3	7.0	7.6	7.0	7.6	7.9	9.5	9.5
5.0	5.6	6.1	5.6	6.1	6.3	7.6	7.6
15 class	18 class	20 class	22 class	25 class	35 class (MXZ-2F42VF)	42 class (MXZ-2F53)	50 class (MXZ-2F53)

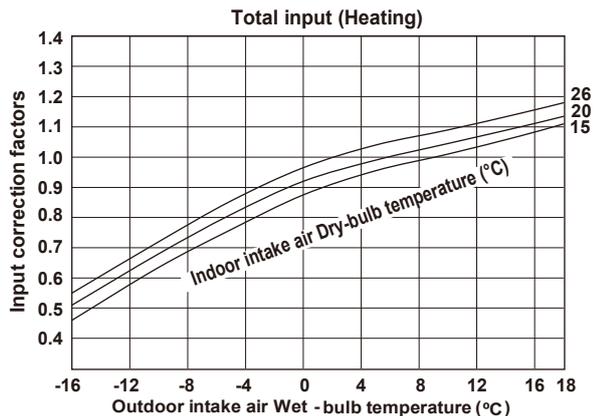
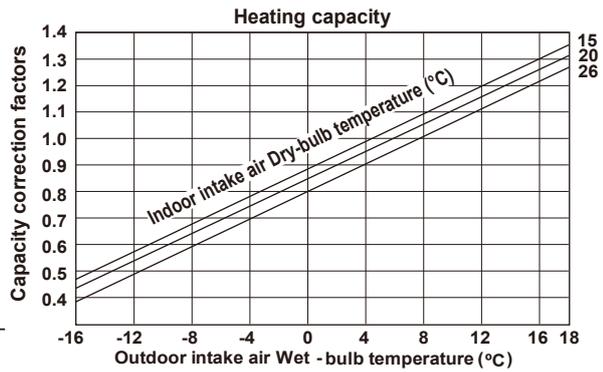


**MXZ-3F54VF    MXZ-3F68VF    MXZ-4F72VF**  
**MXZ-3F54VF2    MXZ-3F68VF2    MXZ-4F72VF2    MXZ-4F80VF2**  
**MXZ-3F54VF3    MXZ-3F68VF3    MXZ-4F72VF3    MXZ-4F80VF3**

5.8	4.1	7.4	5.2	5.9	8.7	11.1	12.8	8.7
5.4	3.8	6.8	4.8	5.5	8.0	10.2	11.6	8.0
4.9	3.5	6.2	4.4	5.0	7.3	9.3	10.5	7.3
4.5	3.2	5.7	4.0	4.6	6.6	8.3	9.5	6.6
4.0	2.9	5.1	3.6	4.1	5.9	7.5	8.5	5.9
3.6	2.6	4.5	3.2	3.7	5.3	6.6	7.5	5.3
3.2	2.3	4.0	2.8	3.2	4.6	5.8	6.6	4.6
2.8	2.0	3.5	2.4	2.8	4.0	5.0	5.6	4.0
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class

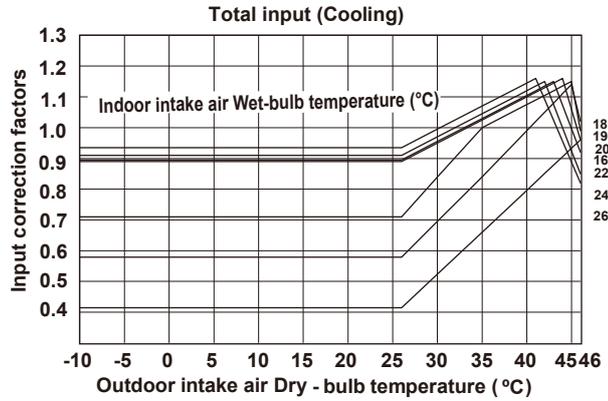
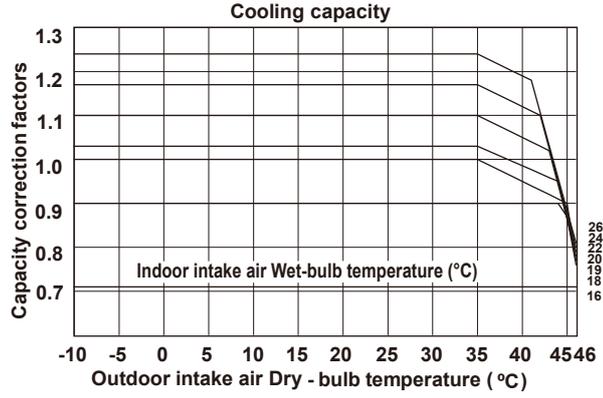


17.6	19.5	21.2	19.5	21.3	22.2	29.9	38.4	30.9
16.3	18.1	19.7	18.1	19.8	20.6	27.8	35.7	28.7
15.1	16.7	18.2	16.7	18.3	19.0	25.7	32.9	26.5
13.8	15.3	16.7	15.3	16.7	17.4	23.5	30.2	24.3
12.6	13.9	15.2	13.9	15.2	15.8	21.4	27.4	22.1
11.3	12.6	13.6	12.6	13.7	14.3	19.2	24.7	19.9
10.1	11.2	12.1	11.2	12.2	12.7	17.1	21.9	17.7
8.8	9.8	10.6	9.8	10.7	11.1	15.0	19.2	15.5
7.5	8.4	9.1	8.4	9.1	9.5	12.8	16.5	13.2
6.3	7.0	7.6	7.0	7.6	7.9	10.7	13.7	11.0
5.0	5.6	6.1	5.6	6.1	6.3	8.6	11.0	8.8
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class

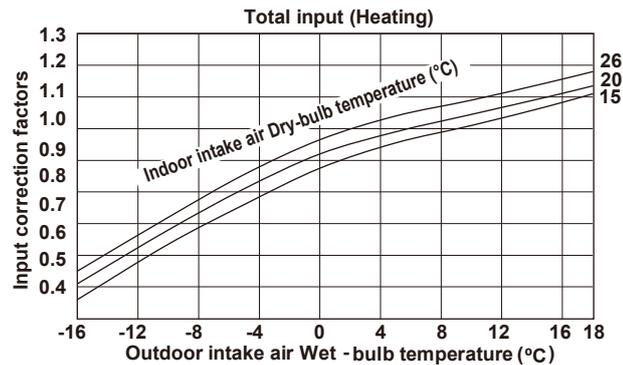
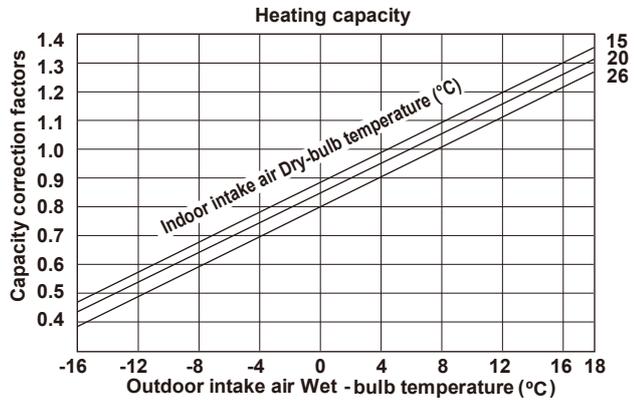


# MXZ-4F83VF MXZ-5F102VF

5.4	3.8	6.8	4.8	5.0	7.3	9.0	9.9	8.2	8.6
4.9	3.5	6.2	4.4	4.6	6.7	8.2	9.0	7.5	7.9
4.5	3.2	5.7	4.0	4.2	6.0	7.4	8.1	6.8	7.1
4.0	2.9	5.1	3.6	3.8	5.4	6.7	7.3	6.1	6.4
3.6	2.6	4.5	3.2	3.4	5.8	5.9	6.4	5.4	5.7
3.2	2.3	4.0	2.8	3.0	4.2	5.2	5.6	4.7	5.0
2.8	2.0	3.5	2.5	2.6	3.7	4.5	4.9	4.1	4.3
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

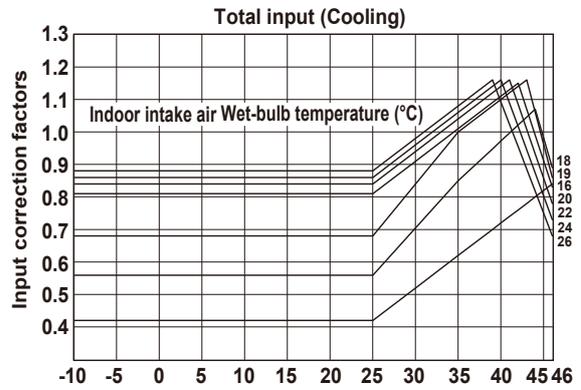
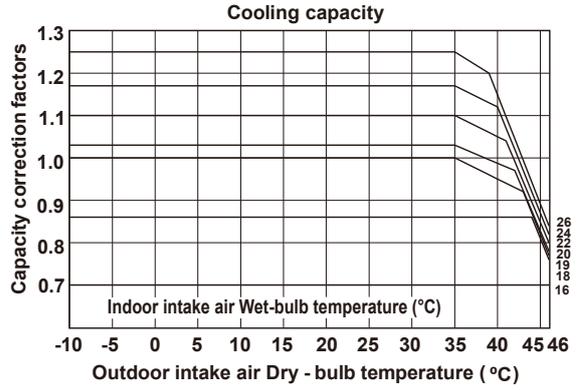


17.9	19.2	21.5	19.2	17.7	22.1	27.5	29.5	27.0	28.9
16.6	17.8	20.5	17.8	16.4	20.6	25.6	27.5	25.0	26.9
15.3	16.5	18.4	16.5	15.2	19.0	23.6	25.4	23.1	24.8
14.0	15.1	16.9	15.1	13.9	17.4	21.6	23.2	21.2	22.7
12.9	13.9	15.6	13.9	12.8	16.0	19.9	21.4	19.5	20.9
11.6	12.5	14.0	12.5	11.5	14.4	17.9	19.2	17.5	18.8
10.3	11.1	12.4	11.1	10.2	12.8	15.9	17.1	15.6	16.7
9.0	9.7	10.9	9.7	9.0	11.2	13.9	15.0	13.6	14.6
7.8	8.4	9.4	8.4	7.8	9.7	12.1	13.0	11.8	12.7
6.5	7.0	7.9	7.0	6.5	8.1	10.1	10.8	9.9	10.6
5.2	5.5	6.3	5.6	5.2	6.5	8.1	8.7	7.9	8.5
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

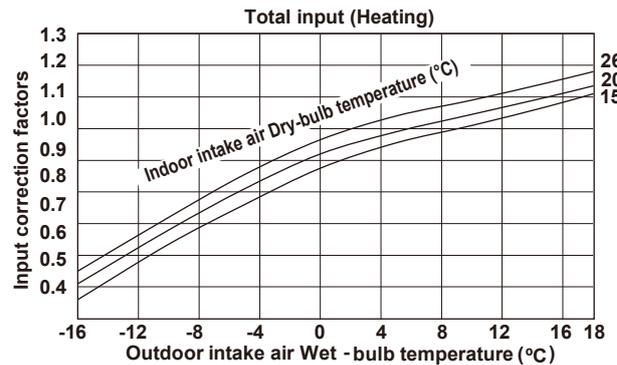
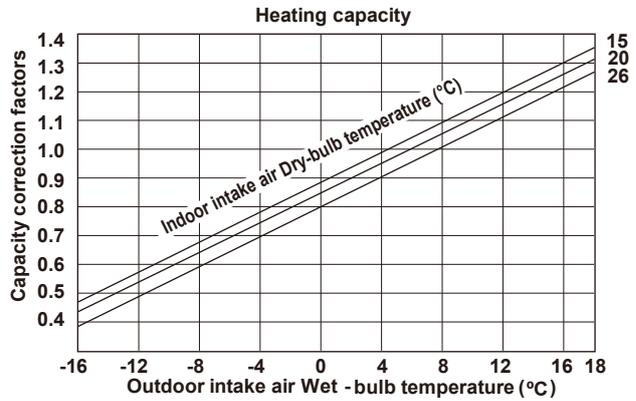


# MXZ-6F122VF

5.4	3.8	6.8	4.8	5.0	7.3	9.0	9.9	8.2	8.6
4.9	3.5	6.2	4.4	4.6	6.7	8.2	9.0	7.5	7.9
4.5	3.2	5.7	4.0	4.2	6.0	7.4	8.1	6.8	7.1
4.0	2.9	5.1	3.6	3.8	5.4	6.7	7.3	6.1	6.4
3.6	2.6	4.5	3.2	3.4	5.8	5.9	6.4	5.4	5.7
3.2	2.3	4.0	2.8	3.0	4.2	5.2	5.6	4.7	5.0
2.8	2.0	3.5	2.5	2.6	3.7	4.5	4.9	4.1	4.3
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

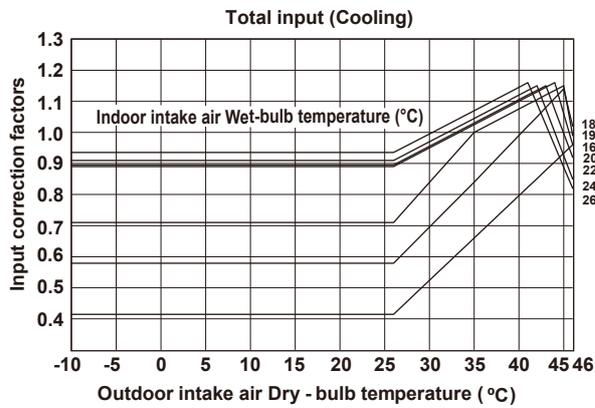
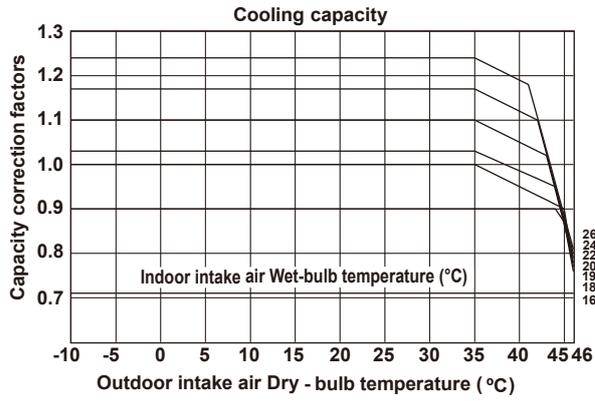


17.9	19.2	21.5	19.2	17.7	22.1	27.5	29.5	27.0	28.9
16.6	17.8	20.5	17.8	16.4	20.6	25.6	27.5	25.0	26.9
15.3	16.5	18.4	16.5	15.2	19.0	23.6	25.4	23.1	24.8
14.0	15.1	16.9	15.1	13.9	17.4	21.6	23.2	21.2	22.7
12.9	13.9	15.6	13.9	12.8	16.0	19.9	21.4	19.5	20.9
11.6	12.5	14.0	12.5	11.5	14.4	17.9	19.2	17.5	18.8
10.3	11.1	12.4	11.1	10.2	12.8	15.9	17.1	15.6	16.7
9.0	9.7	10.9	9.7	9.0	11.2	13.9	15.0	13.6	14.6
7.8	8.4	9.4	8.4	7.8	9.7	12.1	13.0	11.8	12.7
6.5	7.0	7.9	7.0	6.5	8.1	10.1	10.8	9.9	10.6
5.2	5.5	6.3	5.6	5.2	6.5	8.1	8.7	7.9	8.5
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

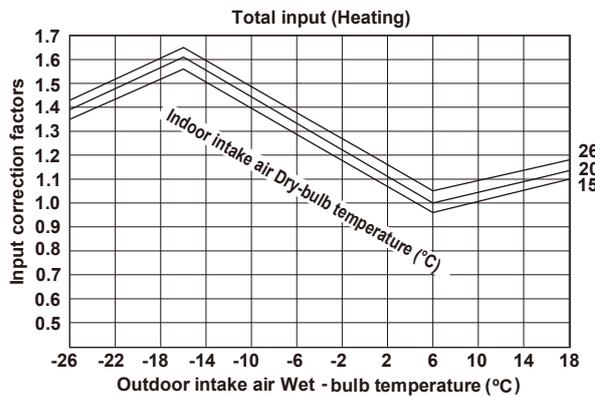
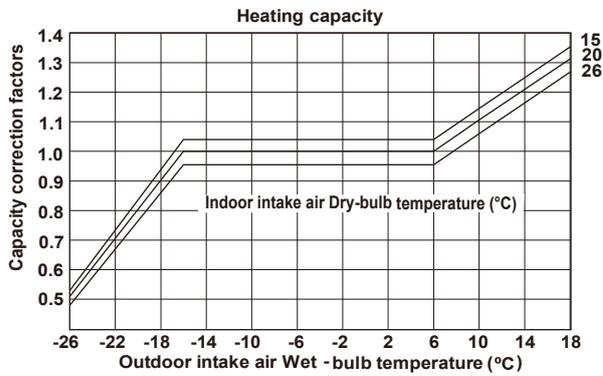


# MXZ-2F53VFHZ

	5.4	3.8	6.8	4.8	5.0	7.3	9.0	9.9
Indoor air Wet-bulb temperature difference (°C)	4.9	3.5	6.2	4.4	4.6	6.7	8.2	9.0
	4.5	3.2	5.7	4.0	4.2	6.0	7.4	8.1
	4.0	2.9	5.1	3.6	3.8	5.4	6.7	7.3
	3.6	2.6	4.5	3.2	3.4	4.8	5.9	6.4
	3.2	2.3	4.0	2.8	3.0	4.2	5.2	5.6
	2.8	2.0	3.5	2.5	2.6	3.7	4.5	4.9
	15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class

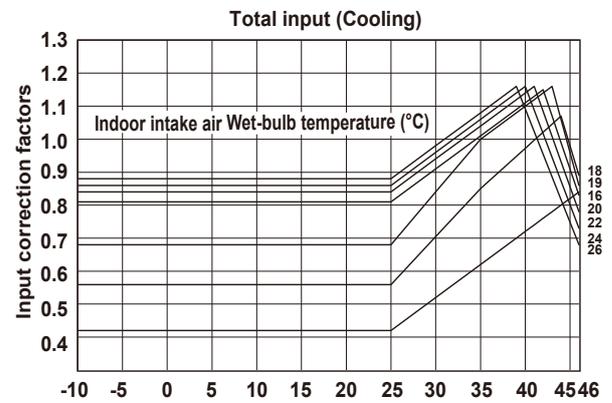
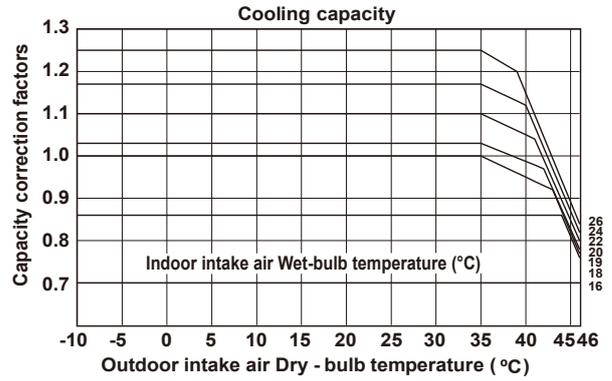


	17.9	19.2	21.5	19.2	17.7	22.1	27.5	29.6
Indoor air Dry-bulb temperature difference (°C)	16.6	17.8	20.0	17.8	16.4	20.6	25.6	27.5
	15.3	16.5	18.4	16.5	15.2	19.0	23.6	25.4
	14.0	15.1	16.9	15.1	13.9	17.4	21.6	23.2
	12.9	13.9	15.6	13.9	12.8	16.0	19.9	21.4
	11.6	12.5	14.0	12.5	11.5	14.4	17.9	19.2
	10.3	11.1	12.4	11.1	10.2	12.8	15.9	17.1
	9.0	9.7	10.9	9.7	9.0	11.2	13.9	15.0
	7.8	8.4	9.4	8.4	7.8	9.7	12.1	13.0
	6.5	7.0	7.9	7.0	6.5	8.1	10.1	10.8
	15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class

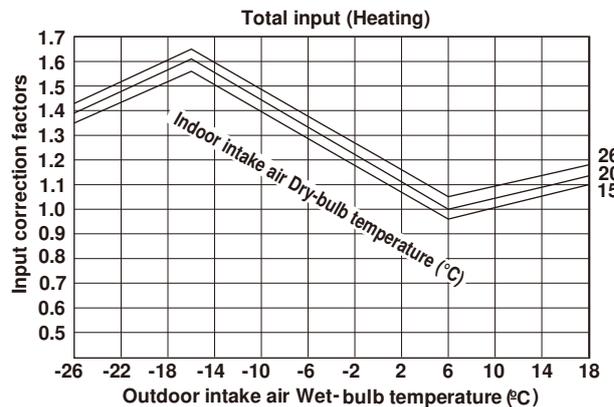
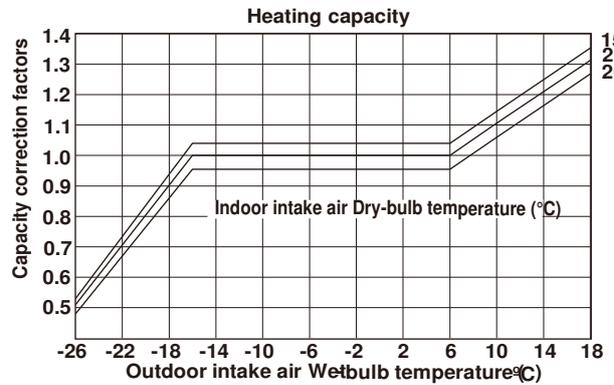


# MXZ-4F83VFHZ

5.4	3.8	6.8	4.8	5.0	7.3	9.0	9.9	8.2	8.6
4.9	3.5	6.2	4.4	4.6	6.7	8.2	9.0	7.5	7.9
4.5	3.2	5.7	4.0	4.2	6.0	7.4	8.1	6.8	7.1
4.0	2.9	5.1	3.6	3.8	5.4	6.7	7.3	6.1	6.4
3.6	2.6	4.5	3.2	3.4	5.8	5.9	6.4	5.4	5.7
3.2	2.3	4.0	2.8	3.0	4.2	5.2	5.6	4.7	5.0
2.8	2.0	3.5	2.5	2.6	3.7	4.5	4.9	4.1	4.3
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

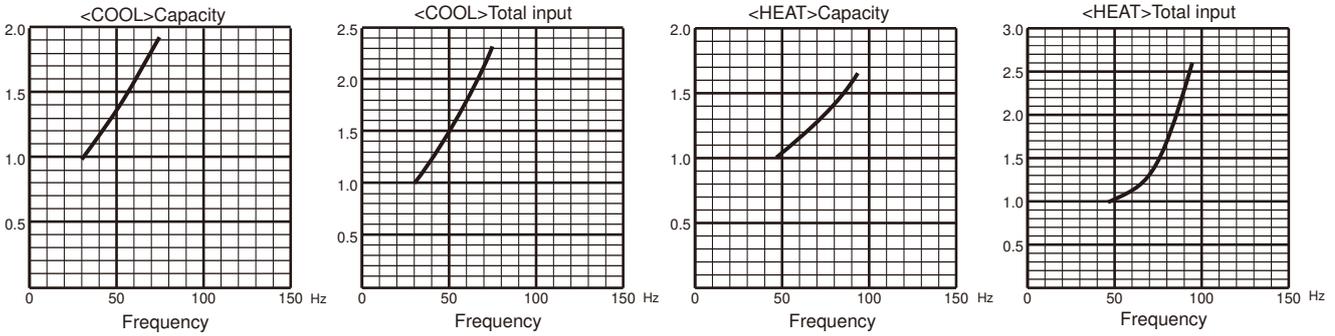


17.9	19.2	21.5	19.2	17.7	22.1	27.5	29.5	27.0	28.9
16.6	17.8	20.5	17.8	16.4	20.6	25.6	27.5	25.0	26.9
15.3	16.5	18.4	16.5	15.2	19.0	23.6	25.4	23.1	24.8
14.0	15.1	16.9	15.1	13.9	17.4	21.6	23.2	21.2	22.7
12.9	13.9	15.6	13.9	12.8	16.0	19.9	21.4	19.5	20.9
11.6	12.5	14.0	12.5	11.5	14.4	17.9	19.2	17.5	18.8
10.3	11.1	12.4	11.1	10.2	12.8	15.9	17.1	15.6	16.7
9.0	9.7	10.9	9.7	9.0	11.2	13.9	15.0	13.6	14.6
7.8	8.4	9.4	8.4	7.8	9.7	12.1	13.0	11.8	12.7
6.5	7.0	7.9	7.0	6.5	8.1	10.1	10.8	9.9	10.6
5.2	5.5	6.3	5.6	5.2	6.5	8.1	8.7	7.9	8.5
15 class	18 class	20 class	22 class	25 class	35 class	42 class	50 class	60 class	71 class

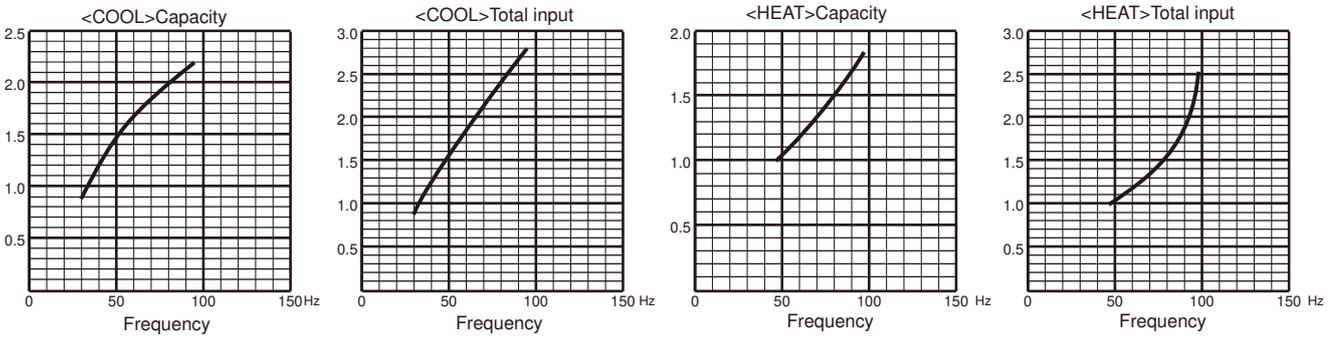


**9-2. CAPACITY AND INPUT CORRECTION BY INVERTER OUTPUT FREQUENCY (single operation)  
MXZ-2F33VF MXZ-2F33VF2 MXZ-2F33VF3**

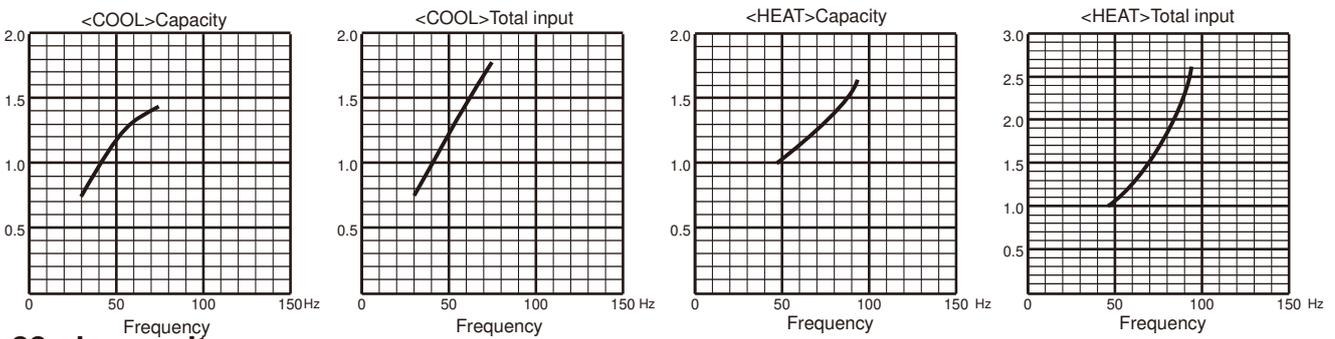
**15-class unit**



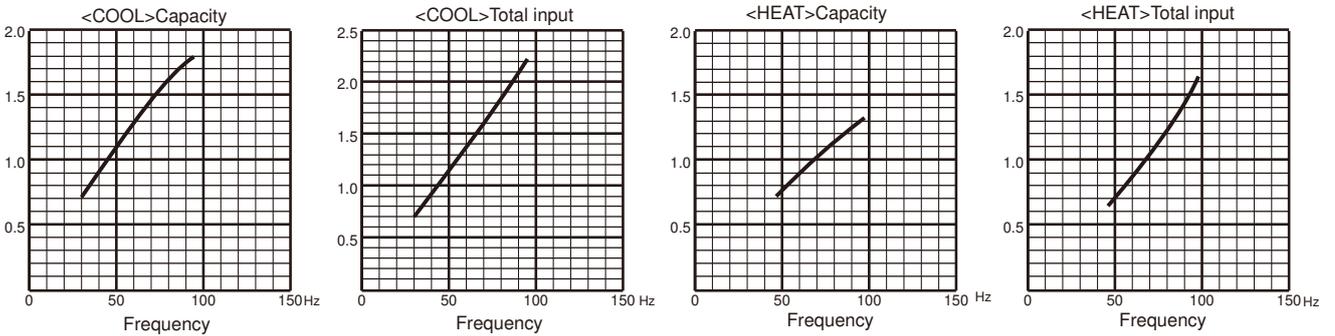
**18-class unit**



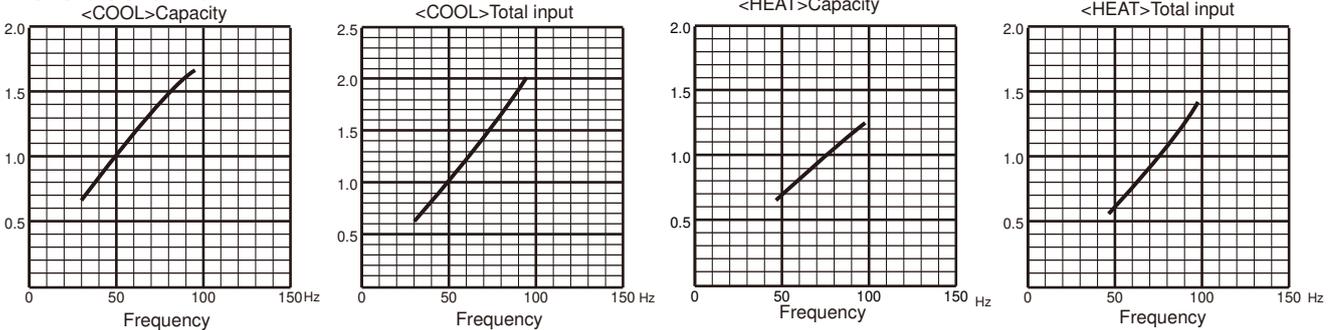
**20-class unit**



**22-class unit**

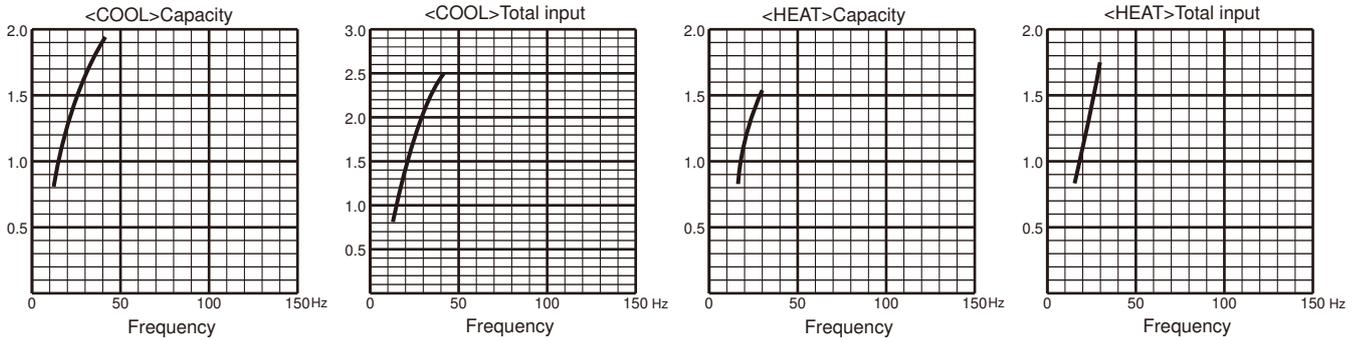


**25-class unit**

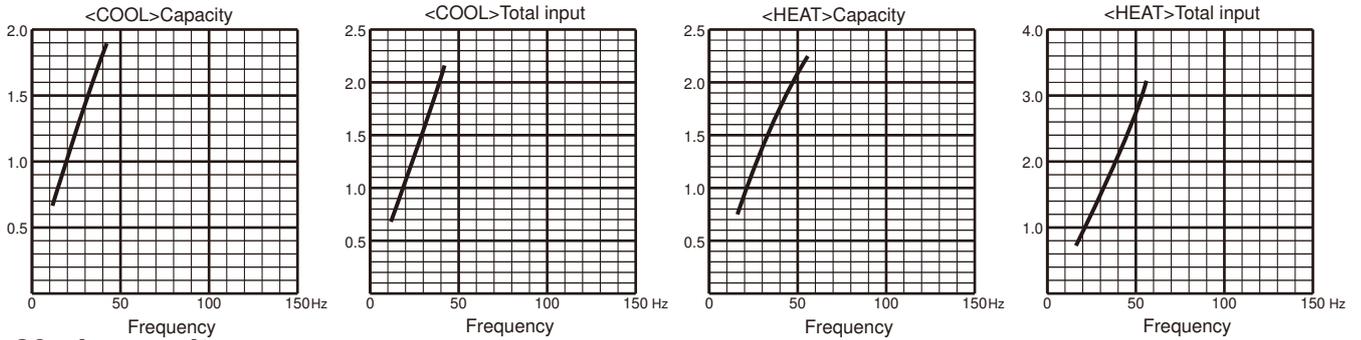


**MXZ-2F42VF MXZ-2F42VF2 MXZ-2F42VF3**

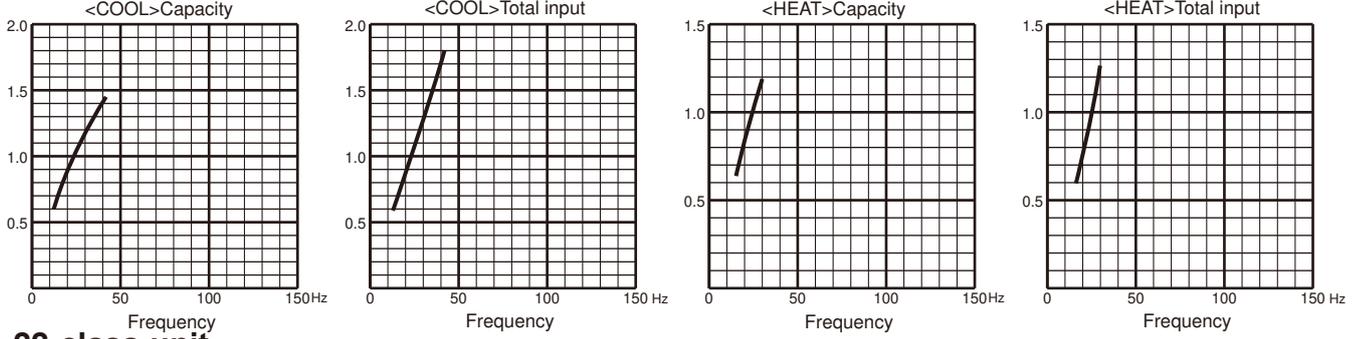
**15-class unit**



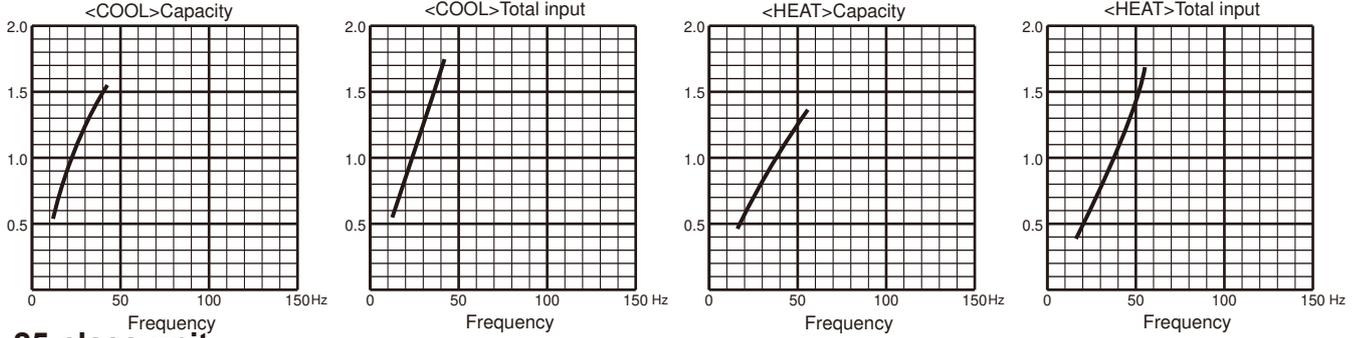
**18-class unit**



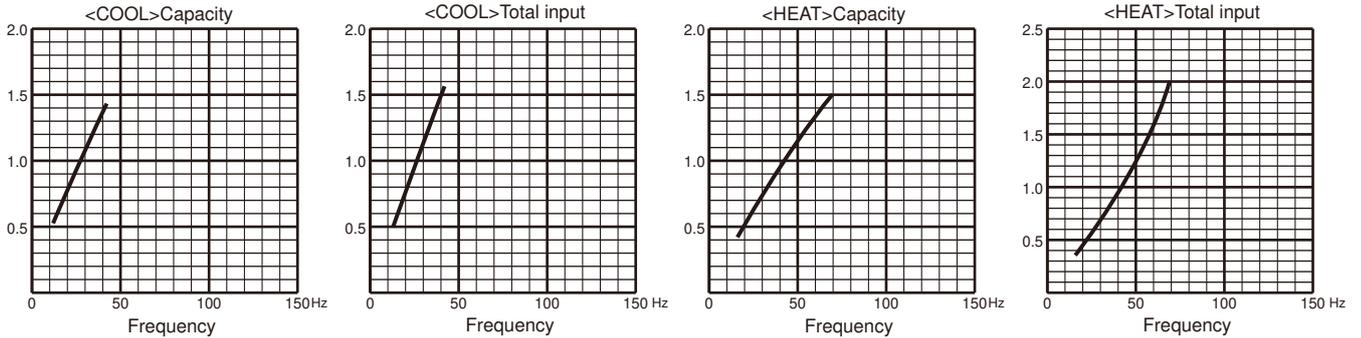
**20-class unit**



**22-class unit**

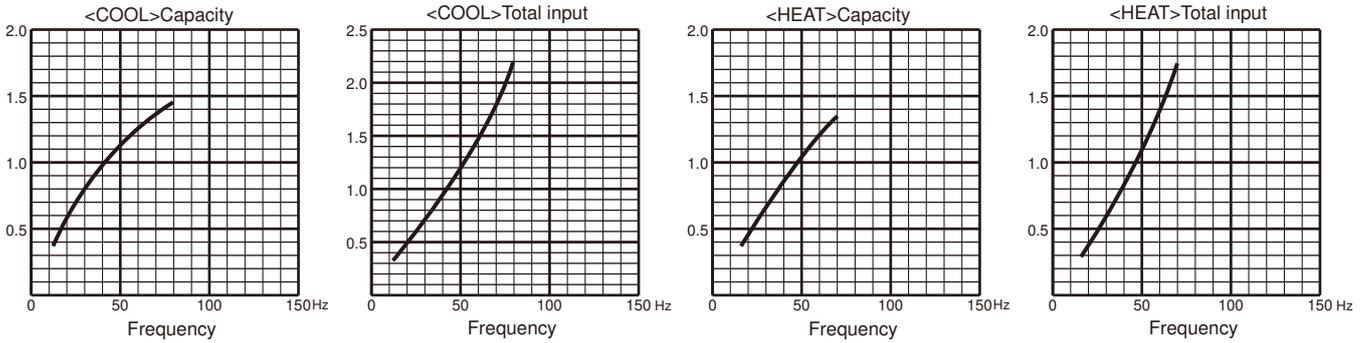


**25-class unit**



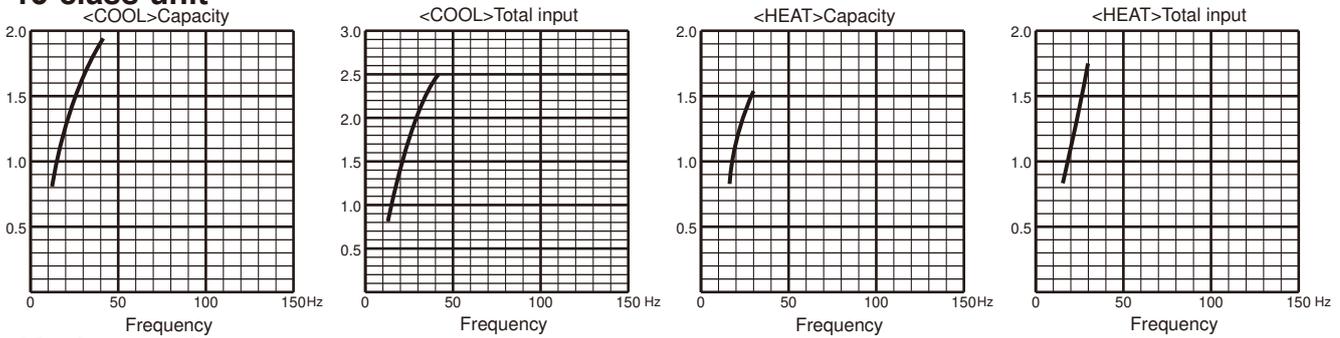
**MXZ-2F42VF MXZ-2F42VF2 MXZ-2F42VF3**

**35-class unit**

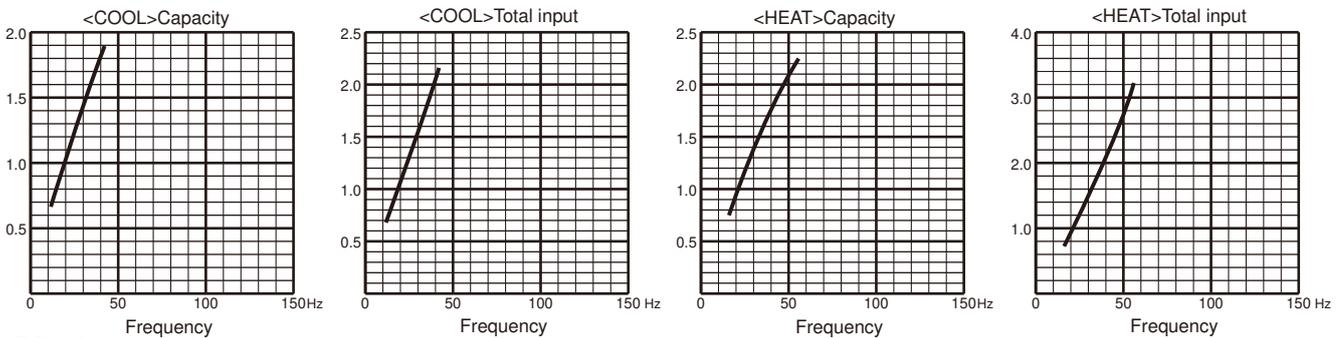


**MXZ-2F53VF MXZ-2F53VF2 MXZ-2F53VF3 MXZ-2F53VFH MXZ-2F53VFH2 MXZ-2F53VFH3**

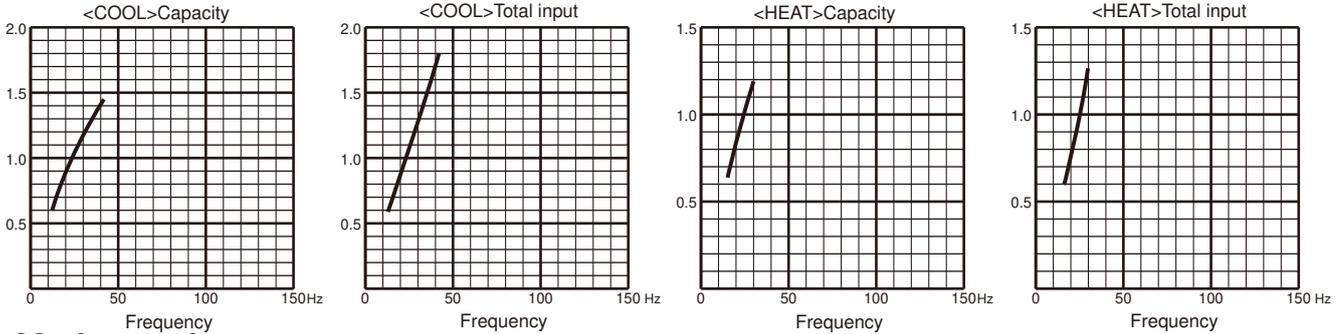
**15-class unit**



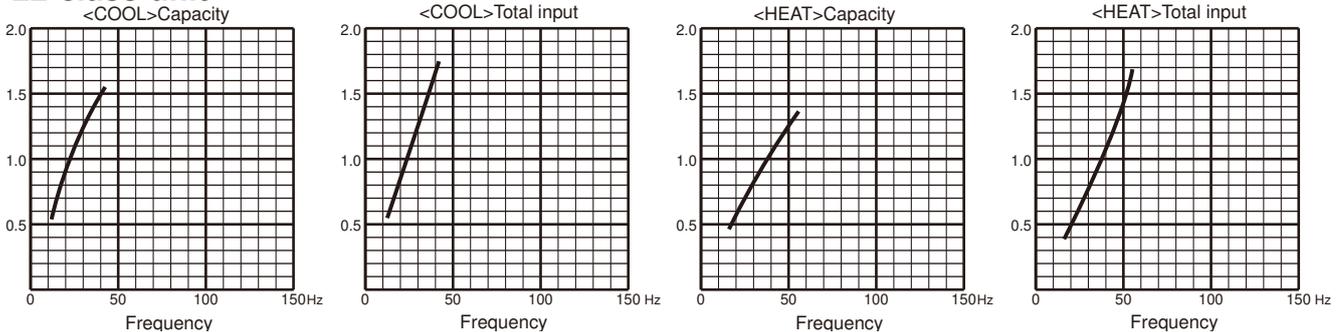
**18-class unit**

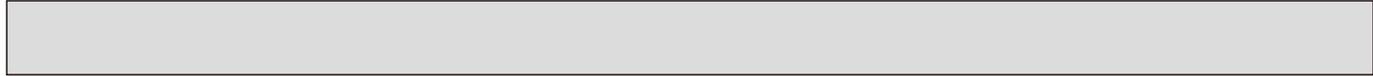


**20-class unit**



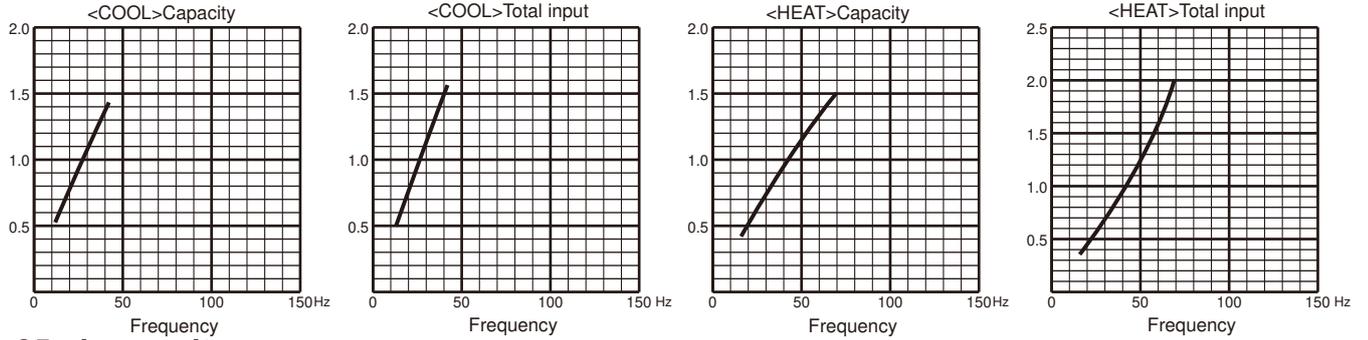
**22-class unit**



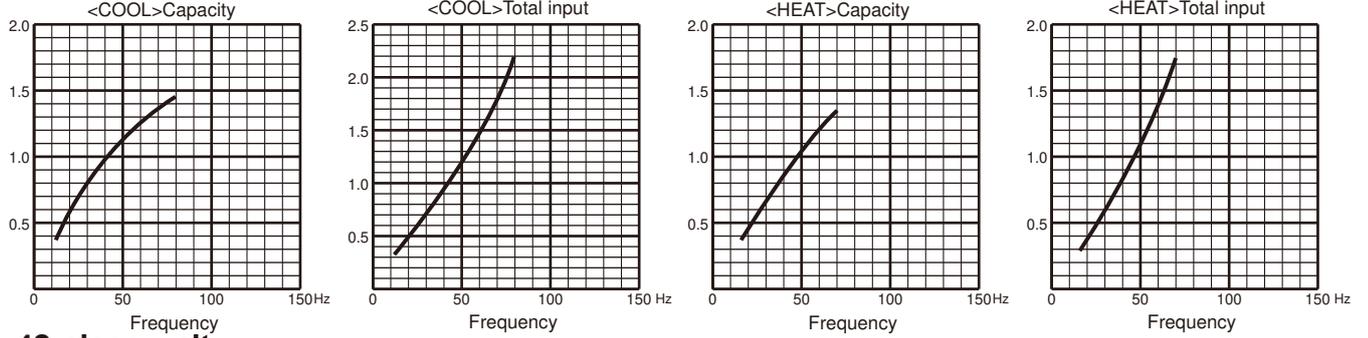


**MXZ-2F53VF MXZ-2F53VF2 MXZ-2F53VF3 MXZ-2F53VFH MXZ-2F53VFH2 MXZ-2F53VFH3**

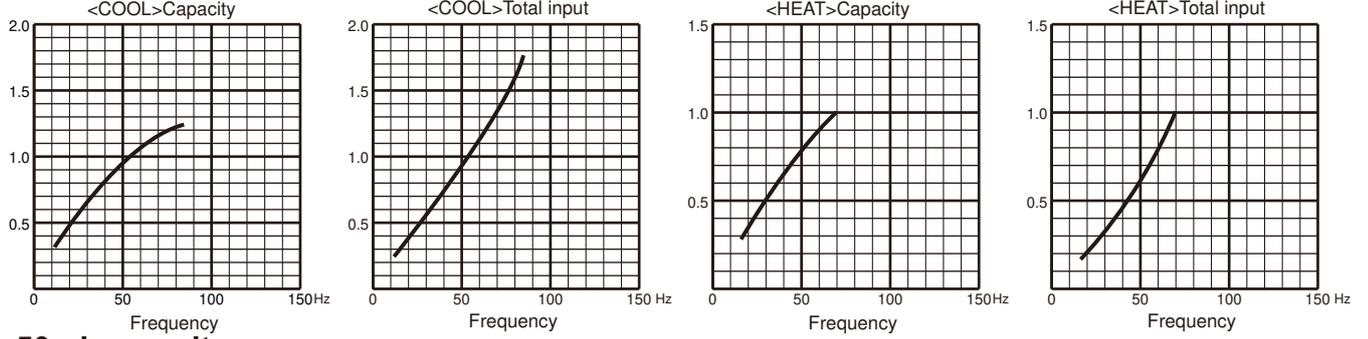
**25-class unit**



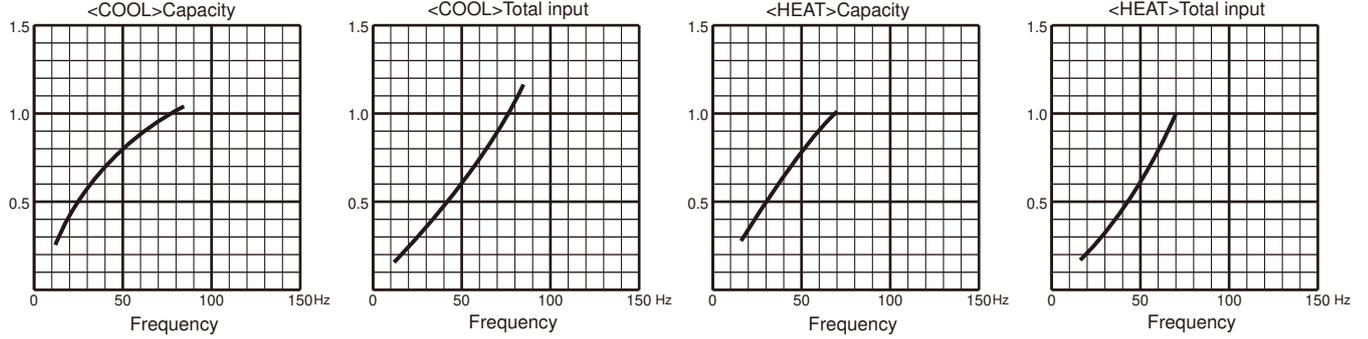
**35-class unit**



**42-class unit**

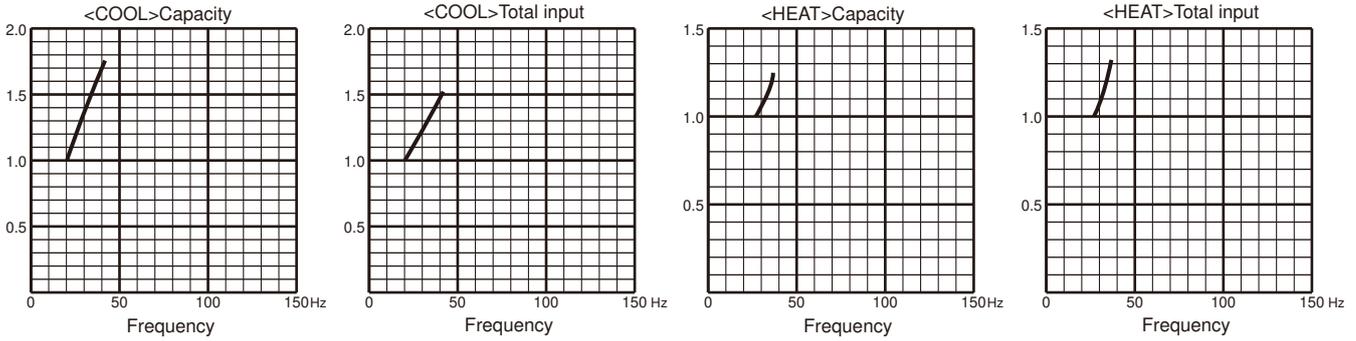


**50-class unit**

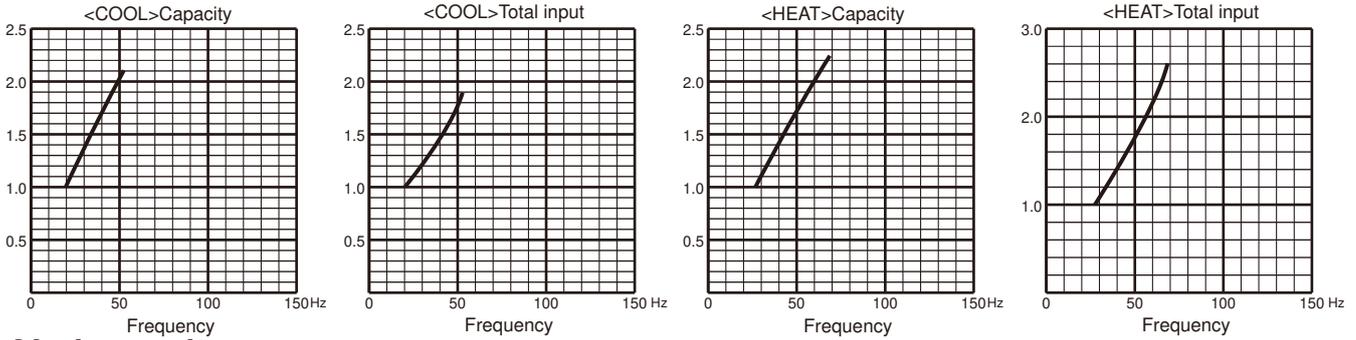


**MXZ-3F54VF MXZ-3F54VF2 MXZ-3F54VF3**

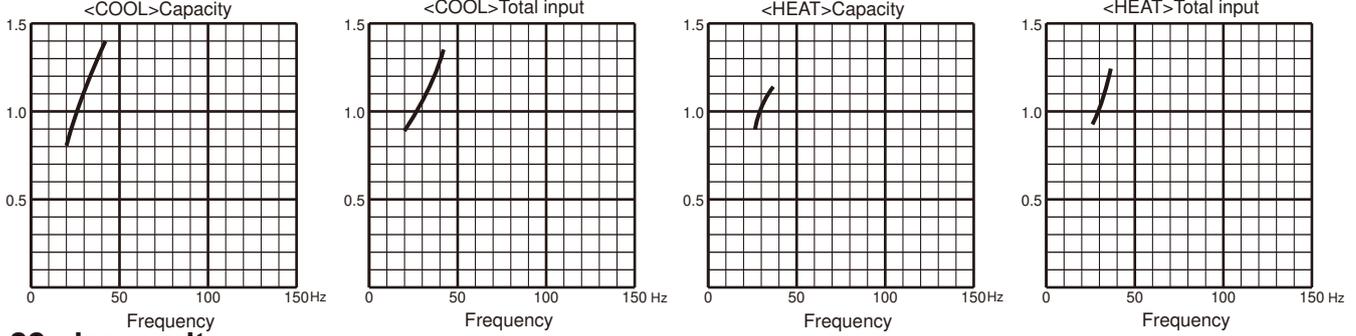
**15-class unit**



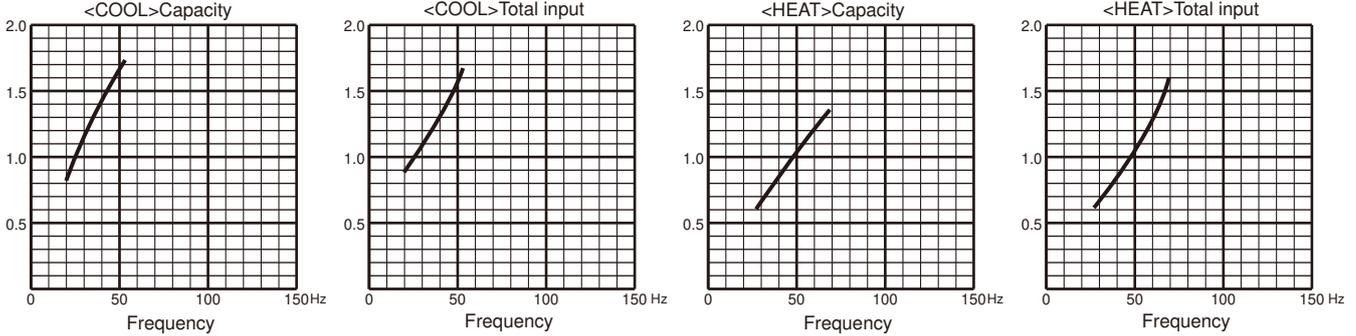
**18-class unit**



**20-class unit**

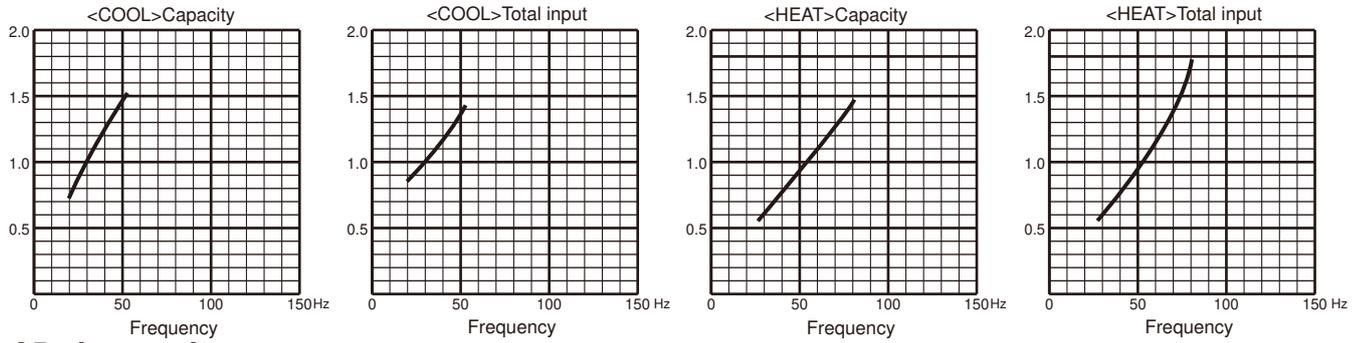


**22-class unit**

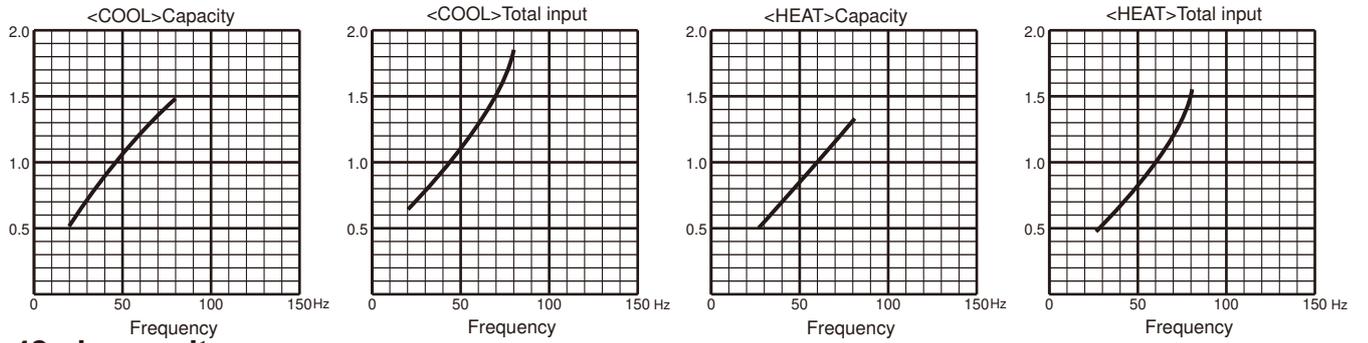


**MXZ-3F54VF MXZ-3F54VF2 MXZ-3F54VF3**

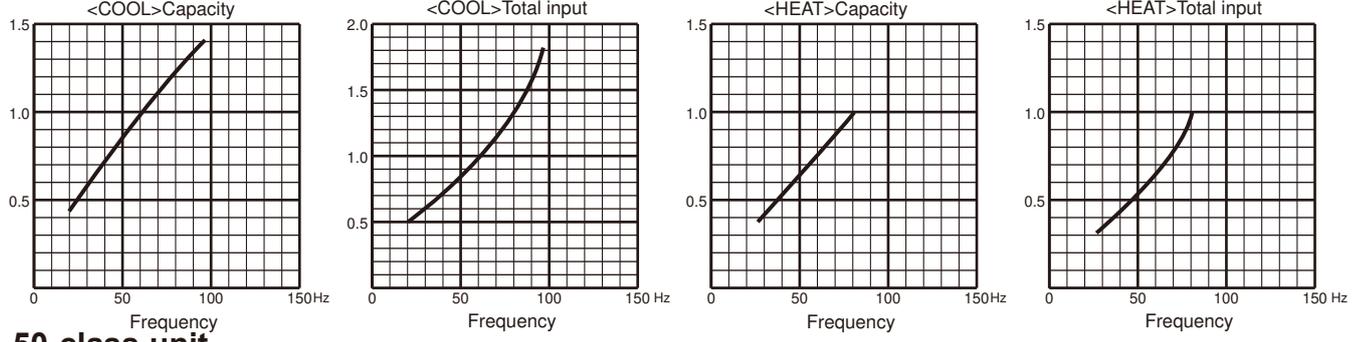
**25-class unit**



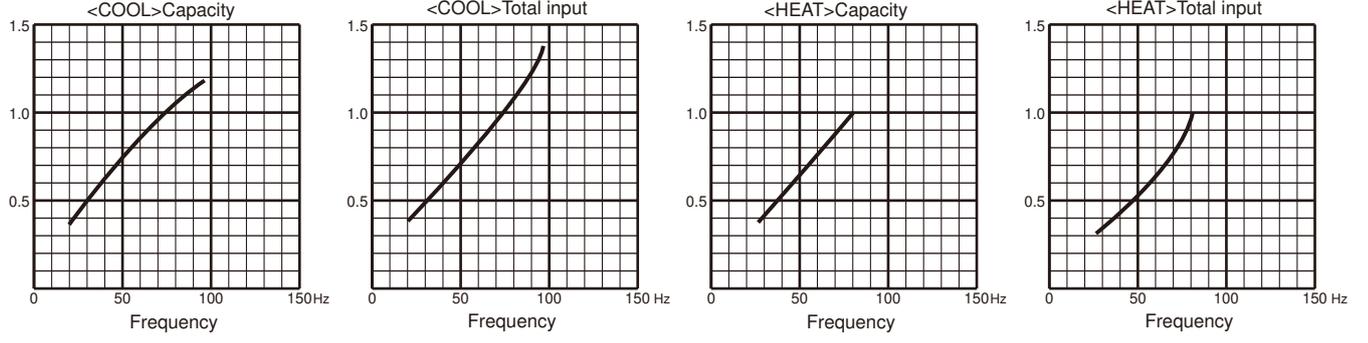
**35-class unit**



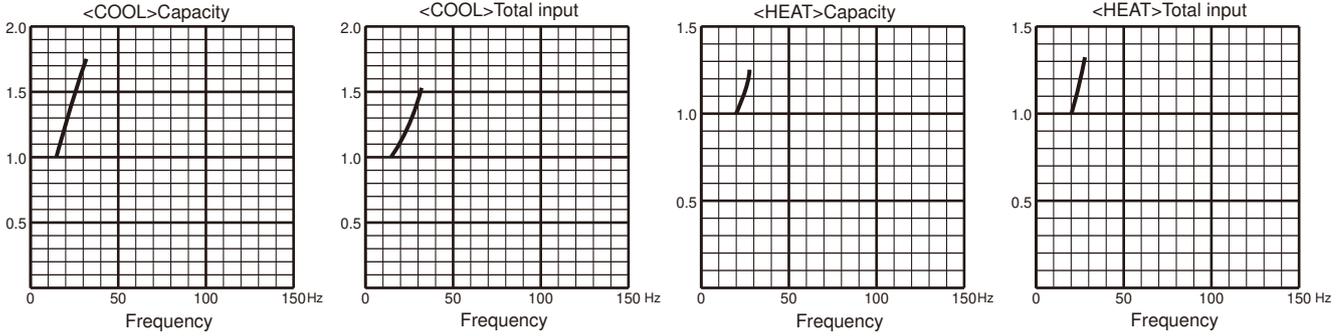
**42-class unit**



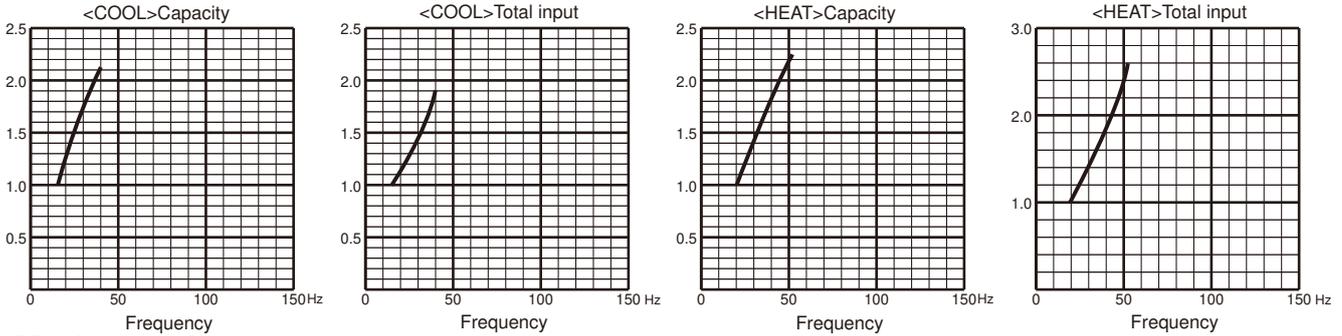
**50-class unit**



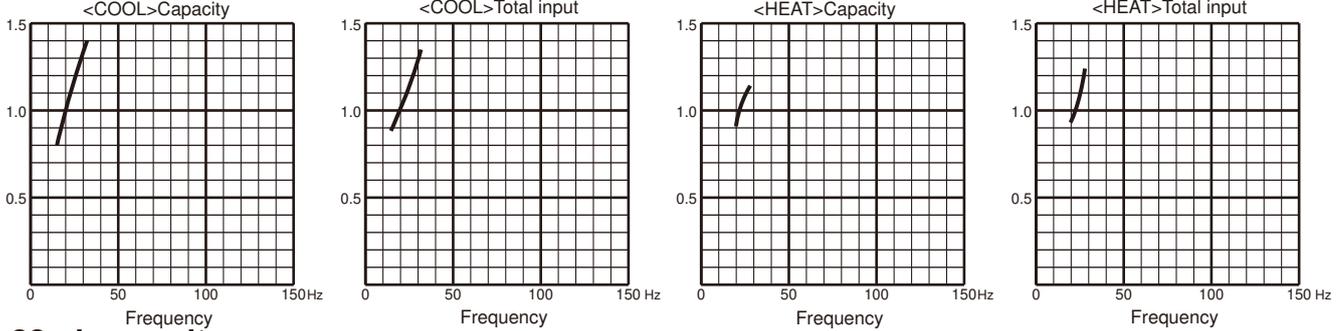
**MXZ-3F68VF MXZ-3F68VF2 MXZ-3F68VF3**  
**15-class unit**



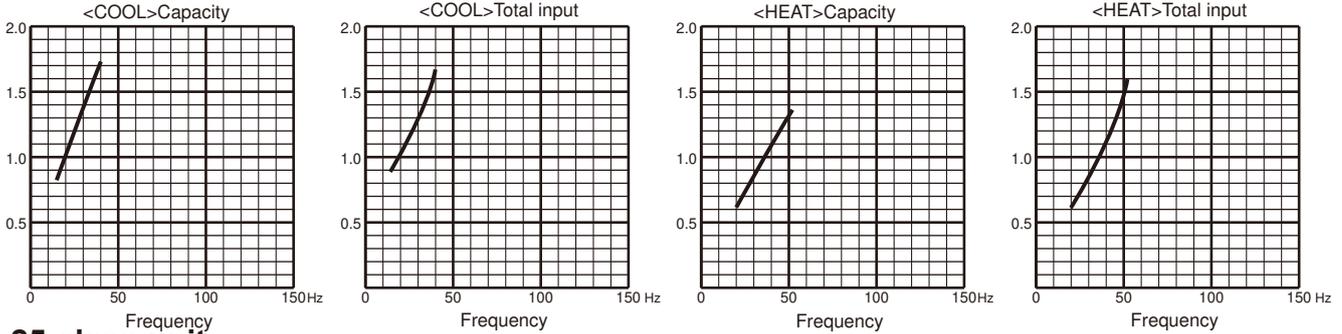
**18-class unit**



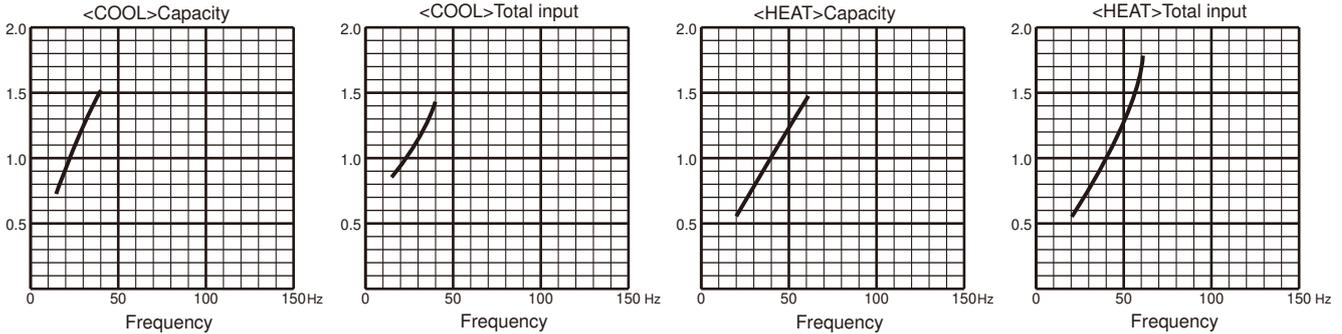
**20-class unit**



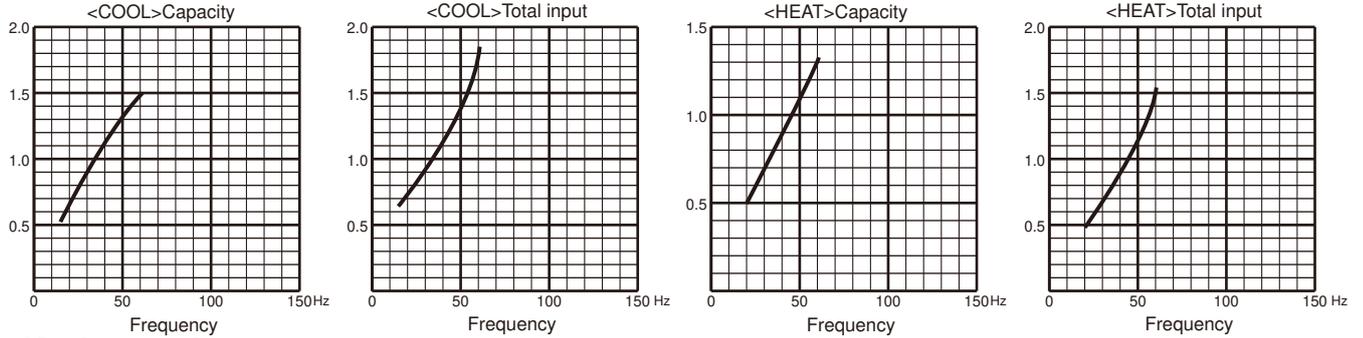
**22-class unit**



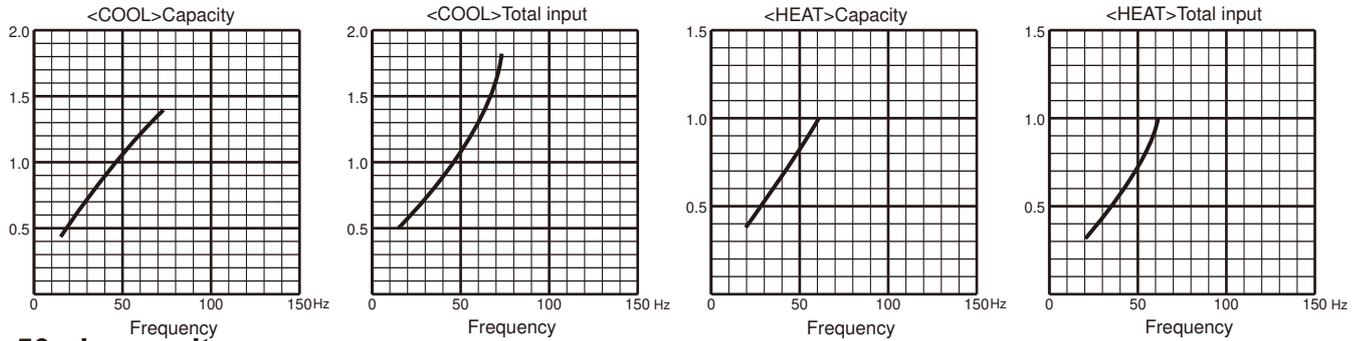
**25-class unit**



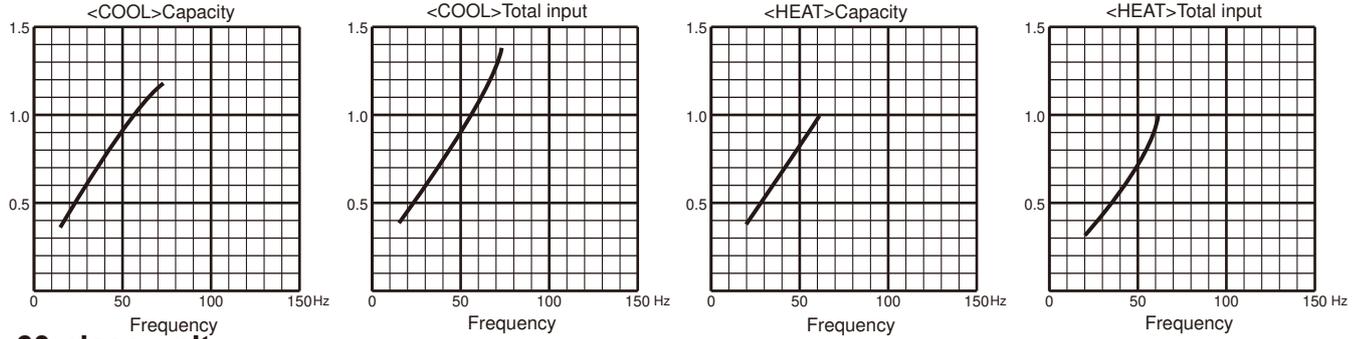
**MXZ-3F68VF MXZ-3F68VF2 MXZ-3F68VF3**  
**35-class unit**



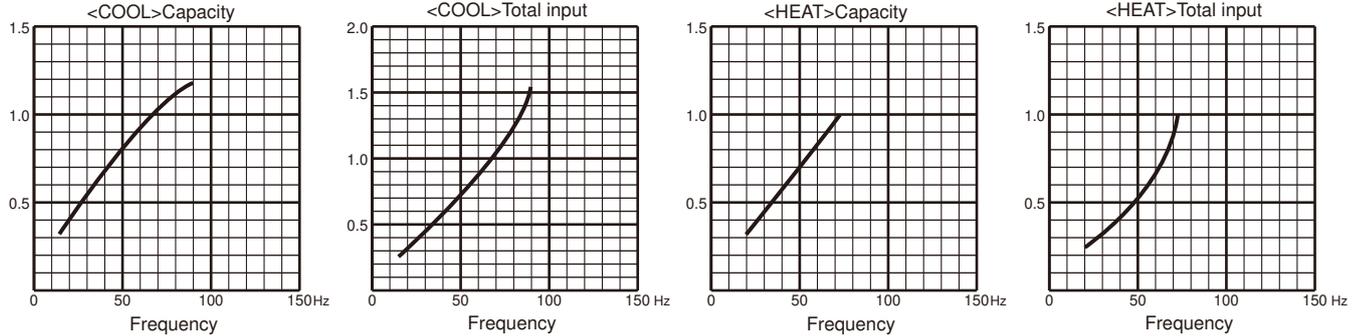
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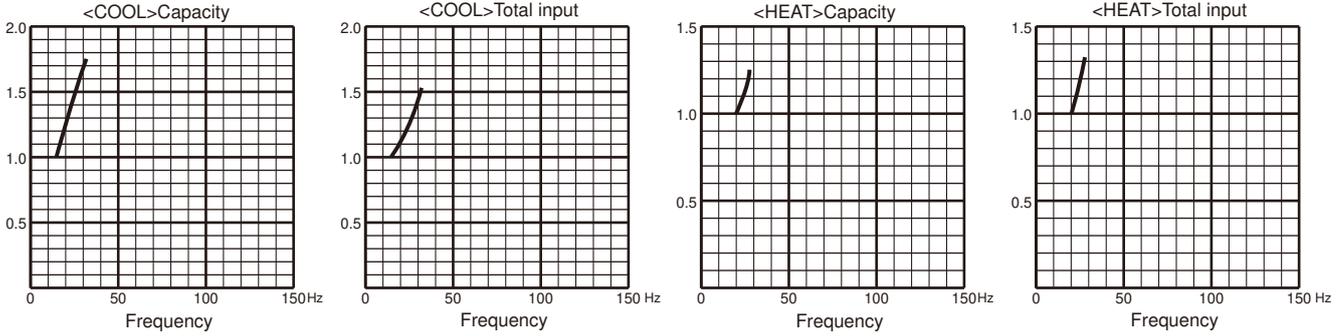
**50-class unit**



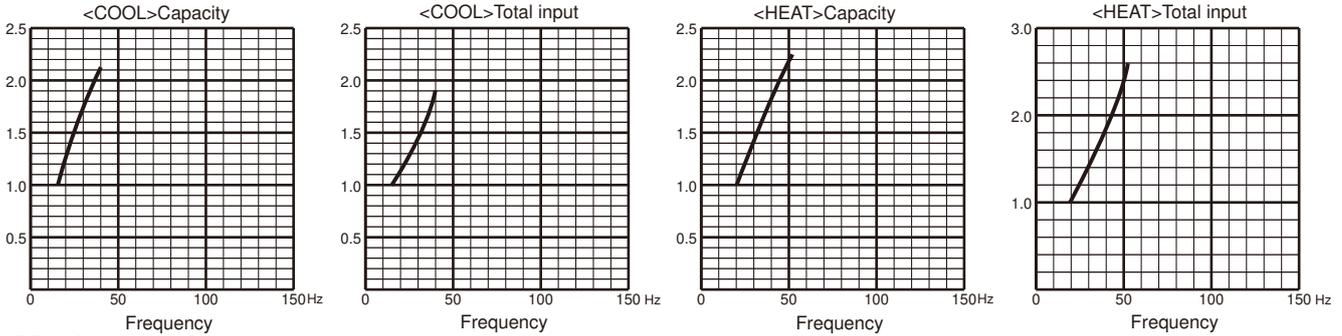
**60-class unit**



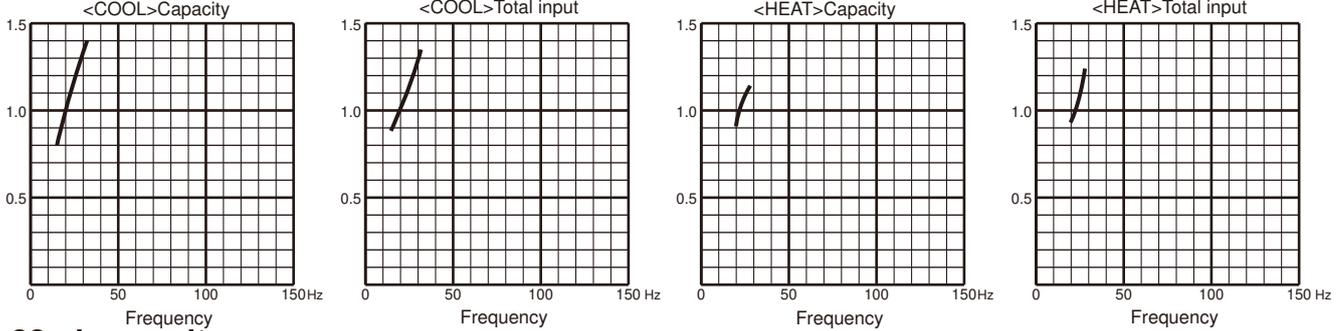
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**15-class unit**



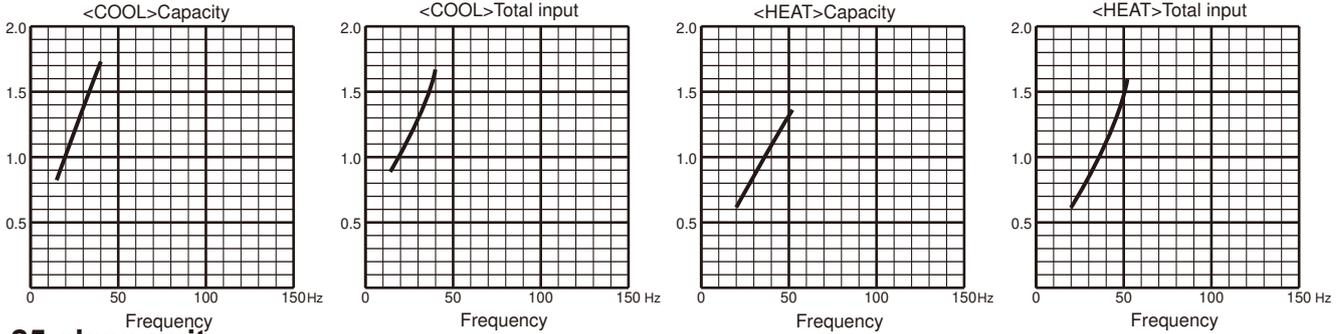
**18-class unit**



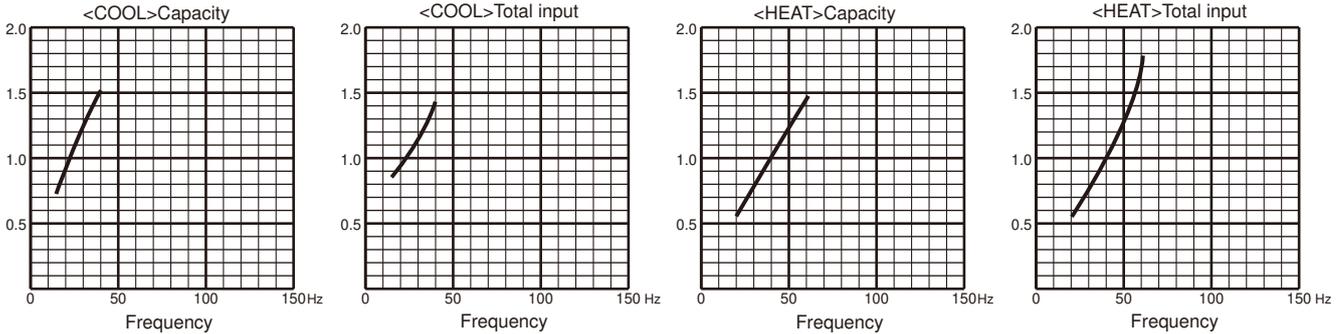
**20-class unit**



**22-class unit**

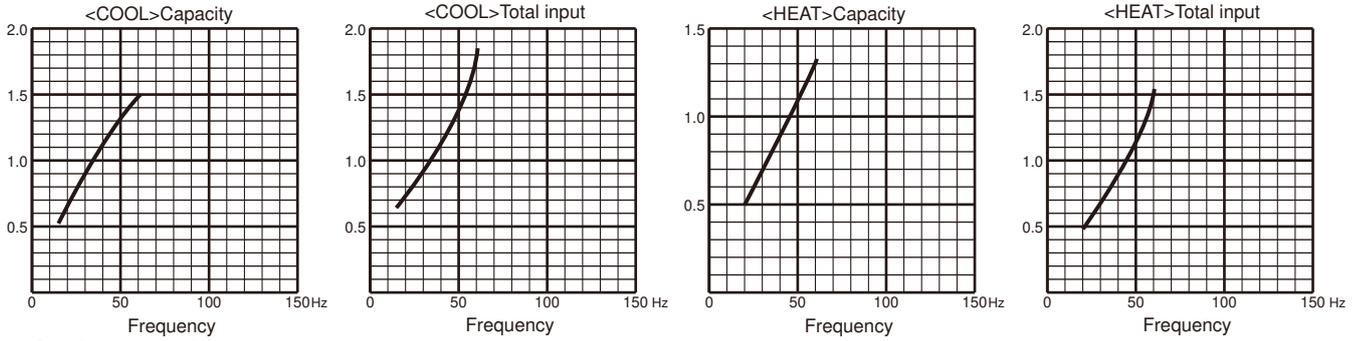


**25-class unit**

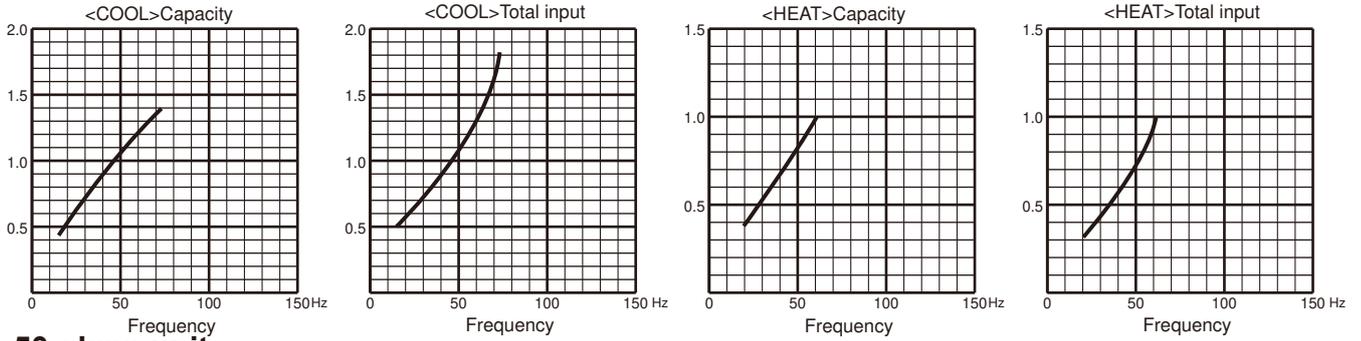


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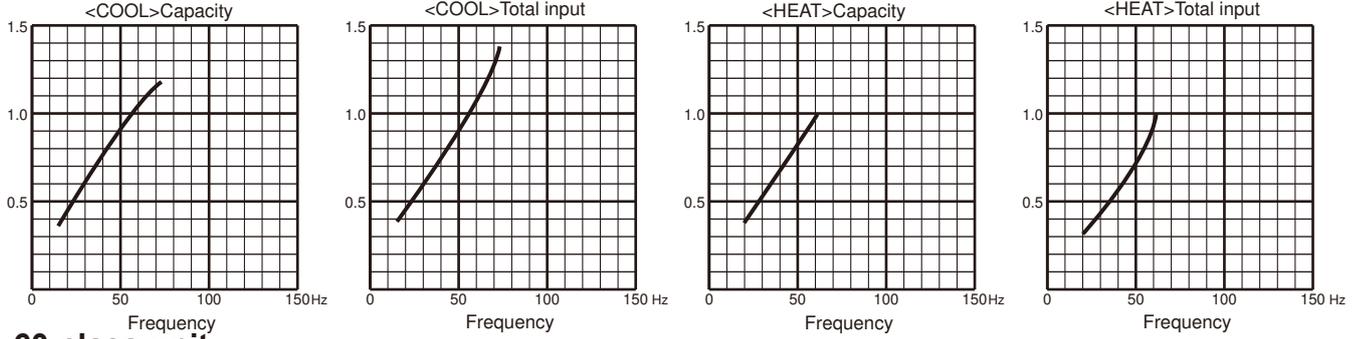
**35-class unit**



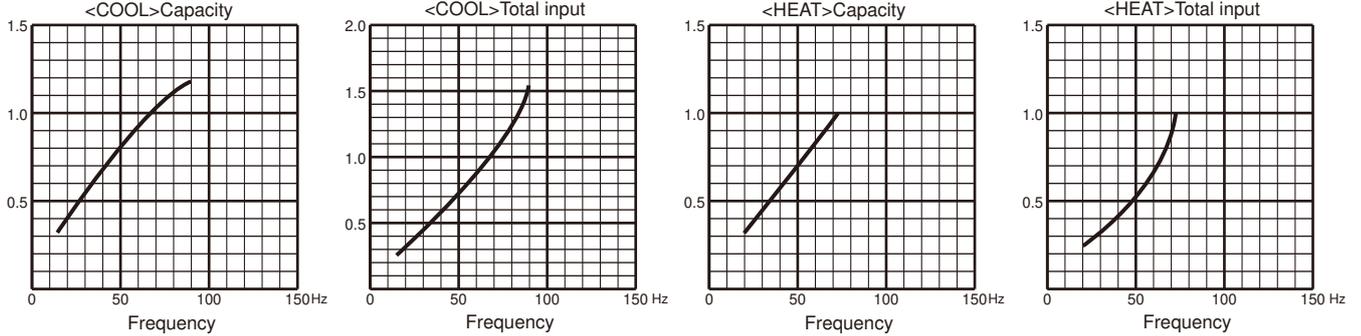
**42-class unit**



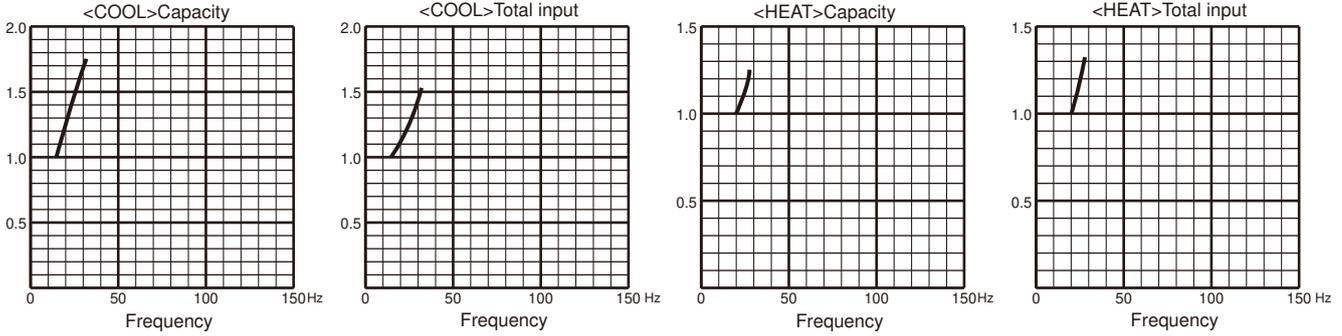
**50-class unit**



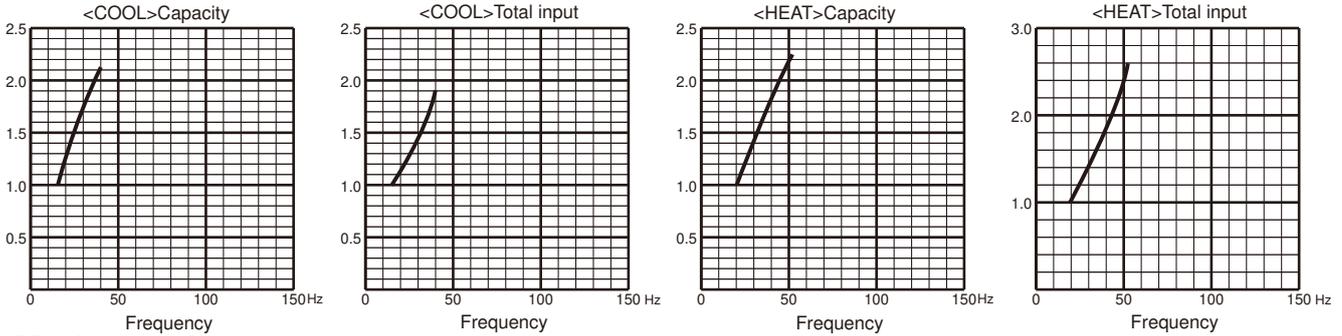
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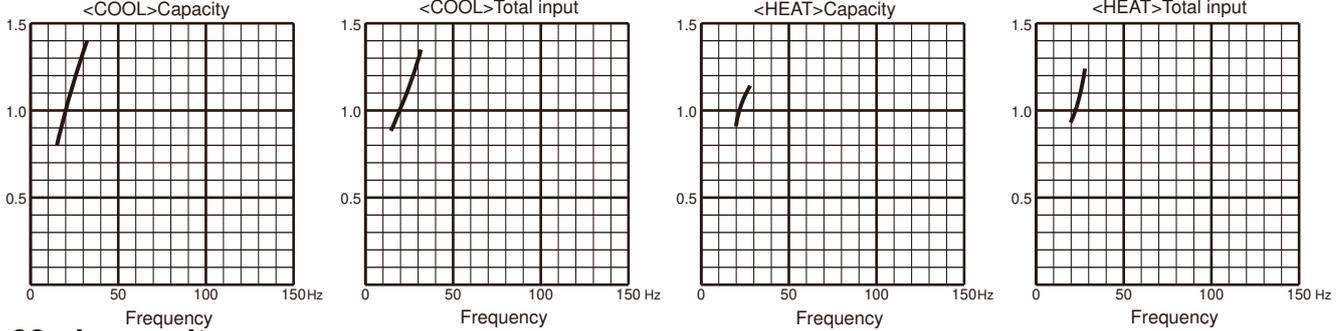
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**15-class unit**



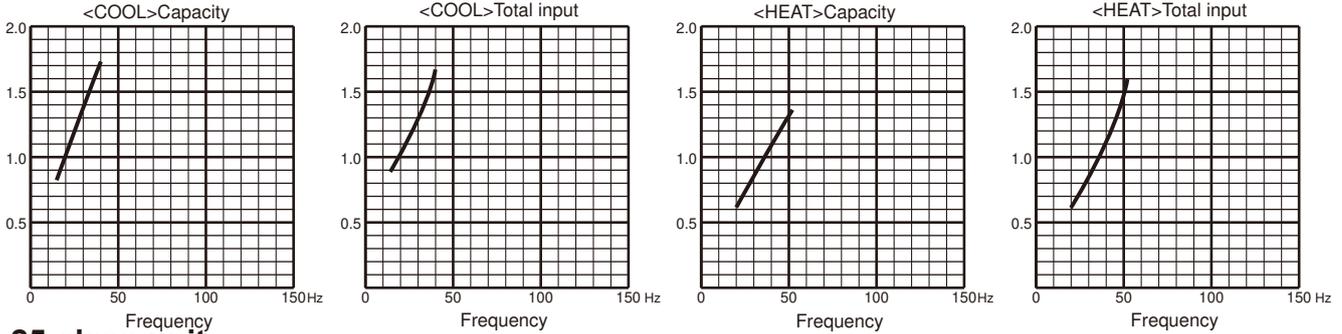
**18-class unit**



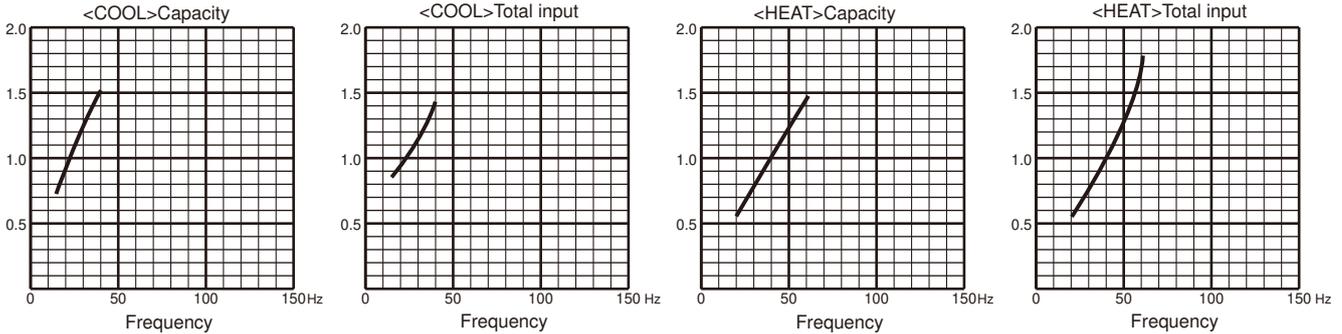
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**22-class unit**

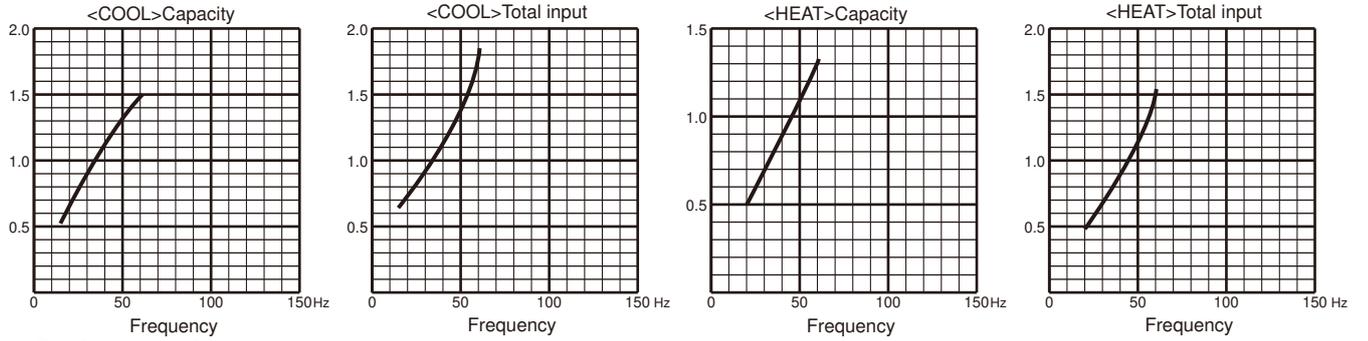


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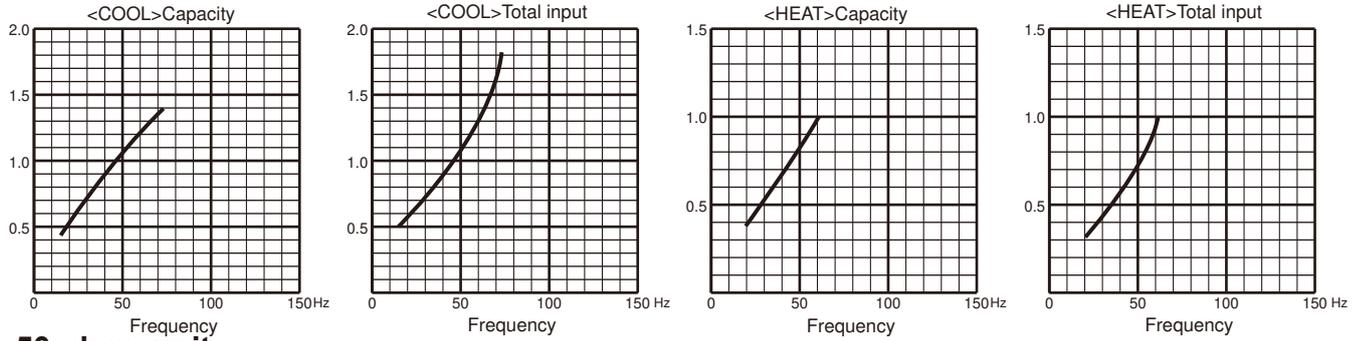


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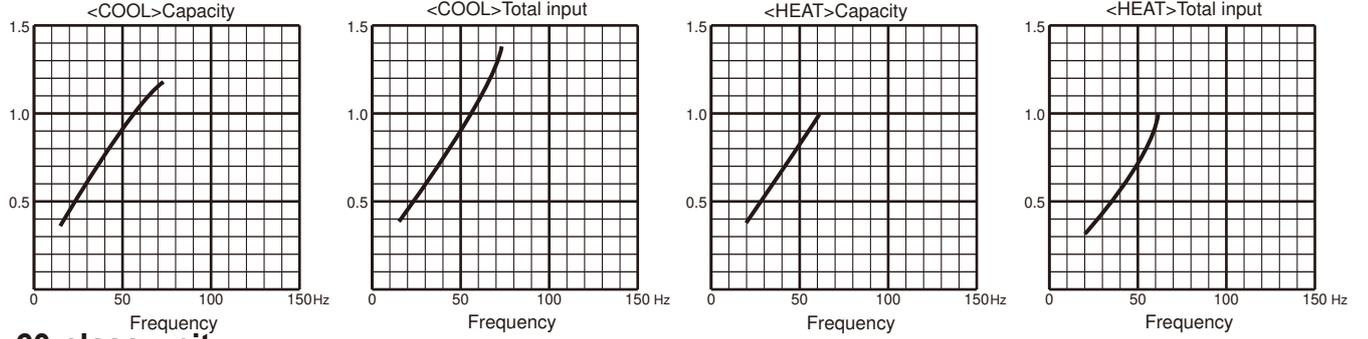
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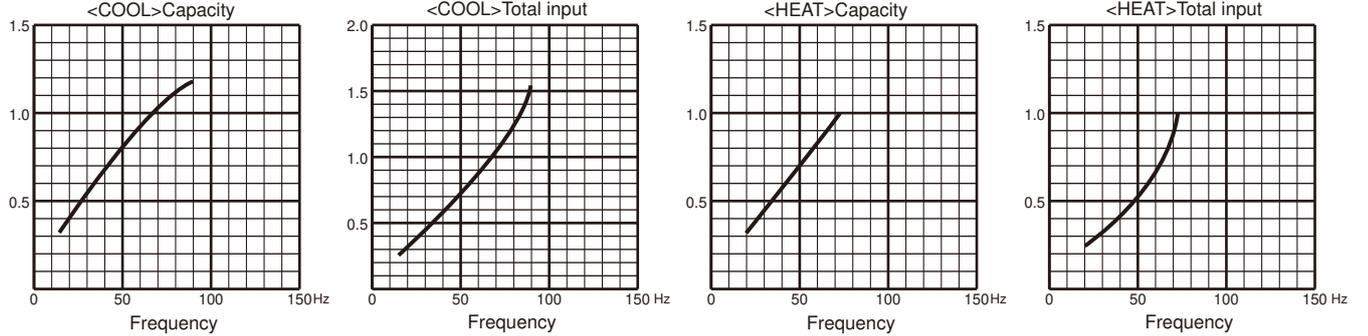
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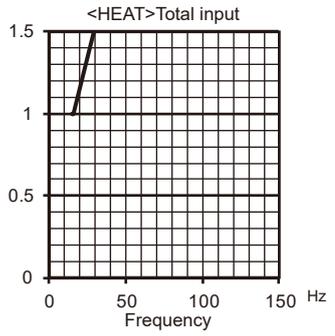
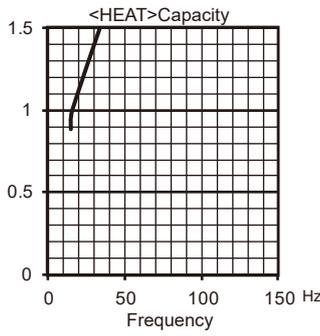
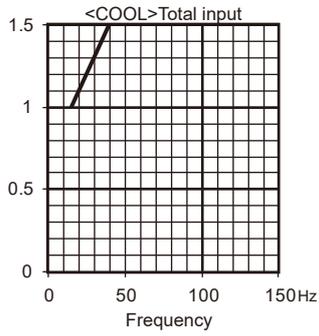
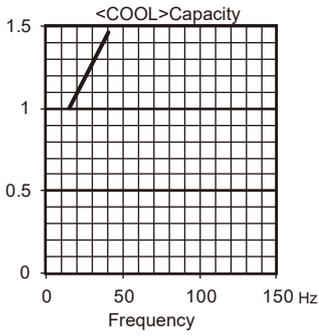
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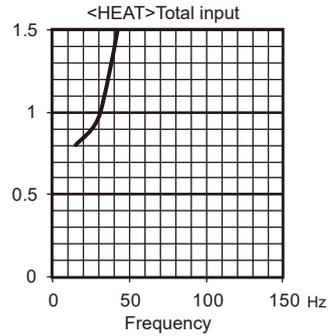
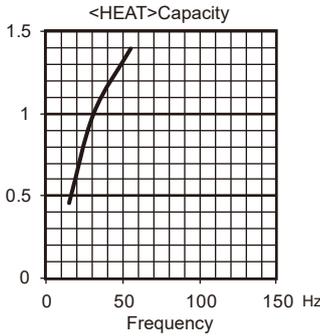
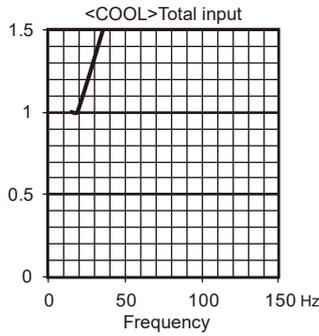
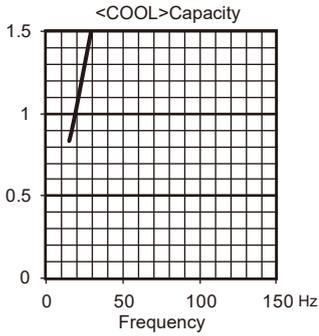
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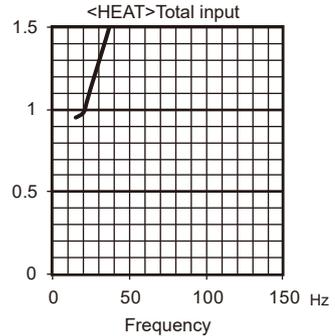
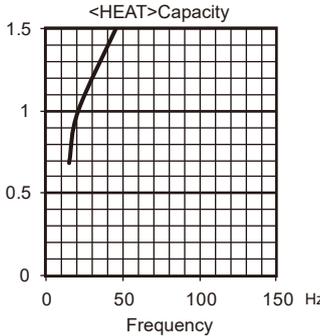
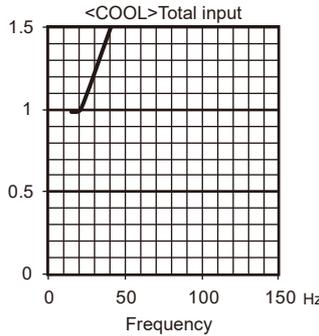
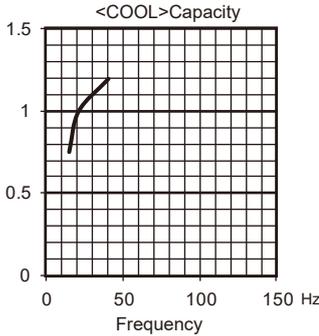
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**15-class unit**



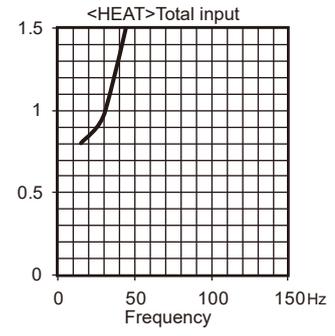
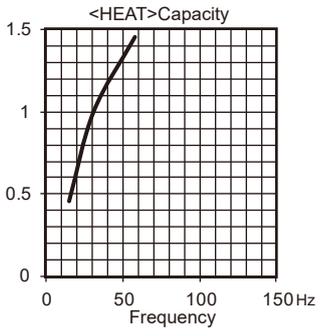
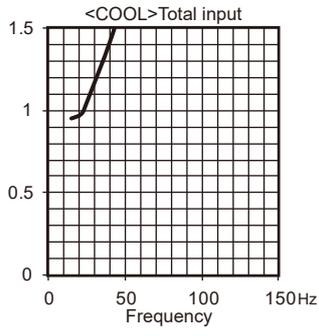
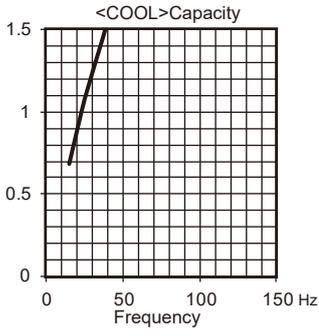
**18-class unit**



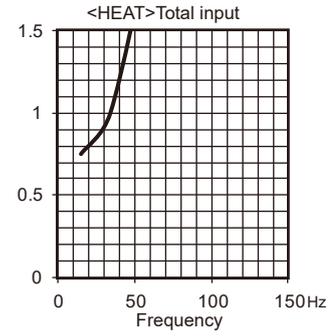
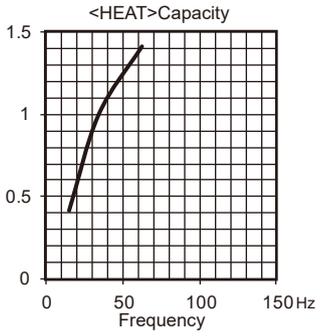
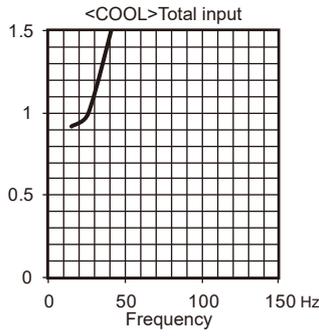
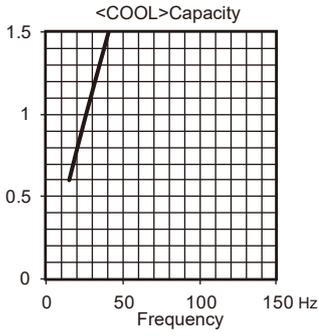
**20-class unit**



**22-class unit**

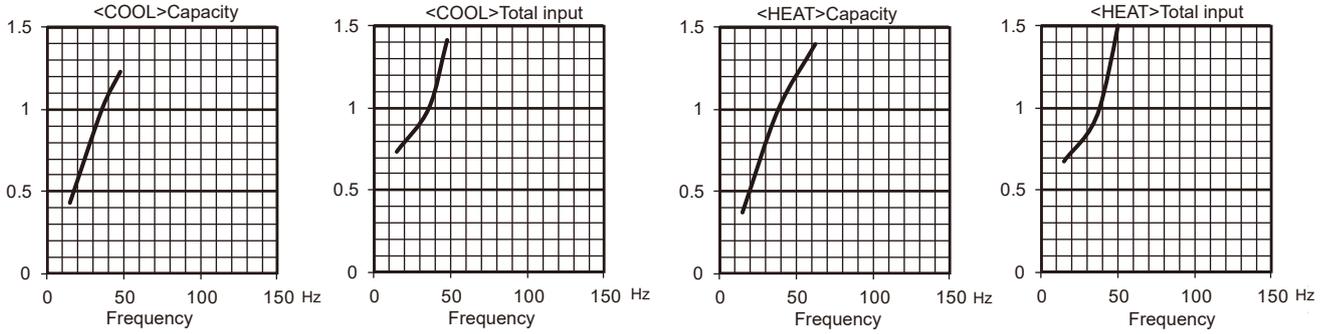


**25-class unit**

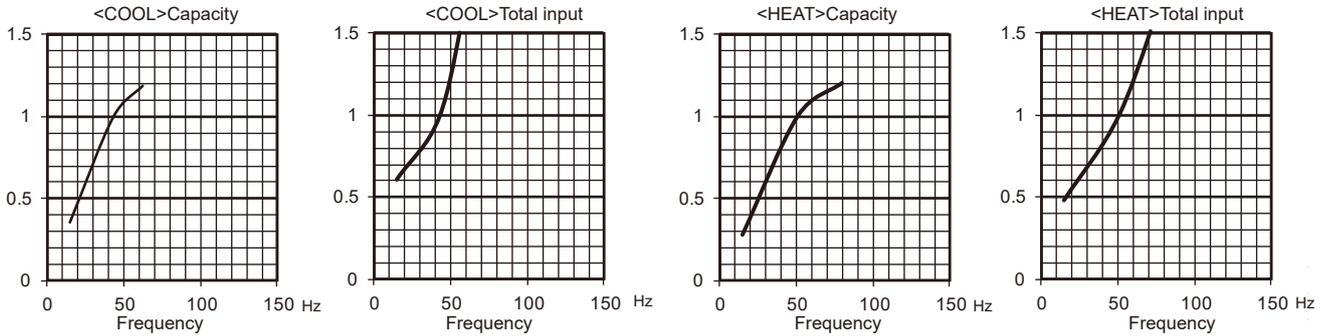


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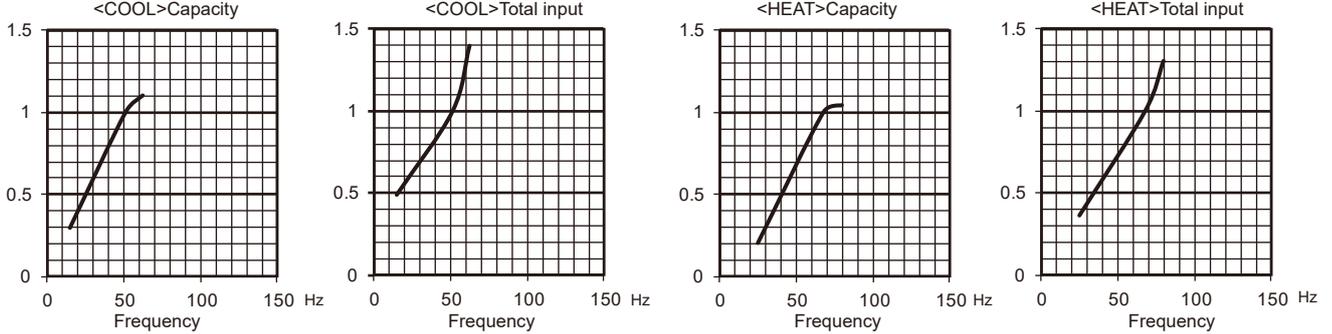
## 35-class unit



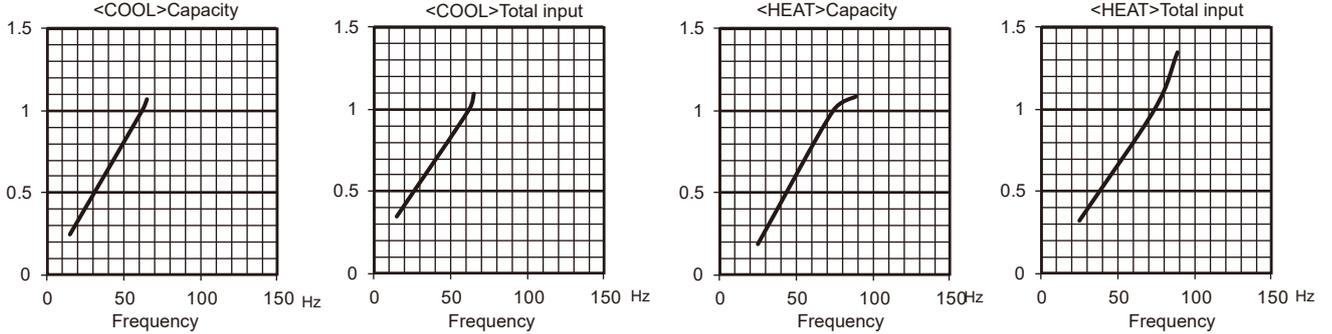
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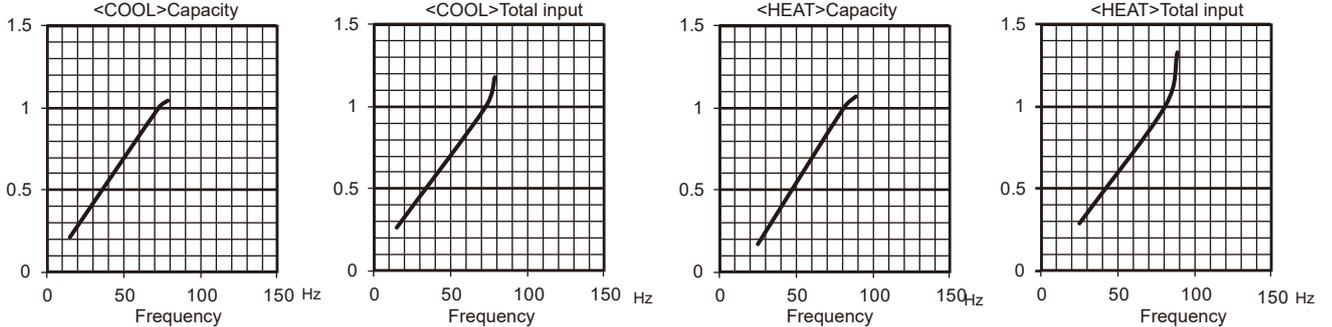
## 50-class unit



## 60-class unit

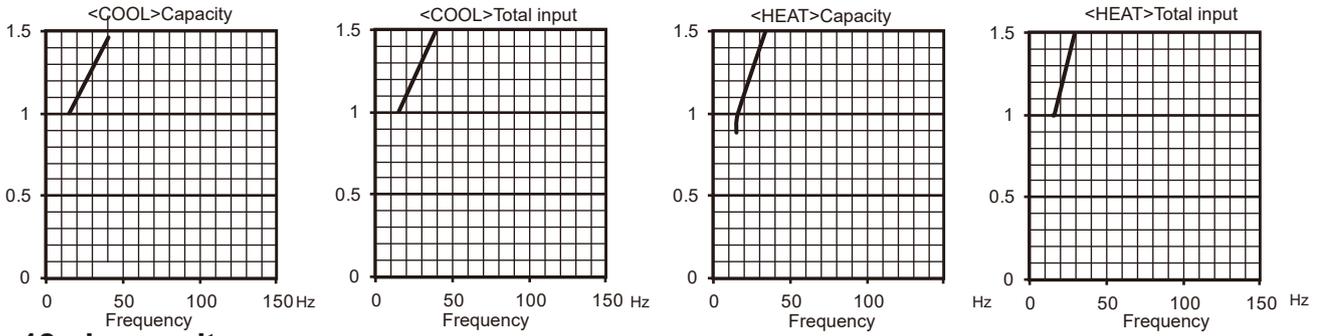


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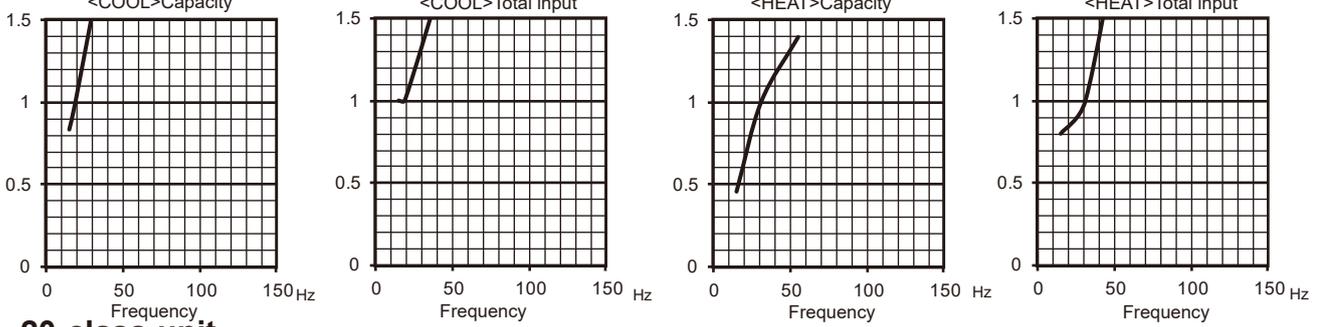


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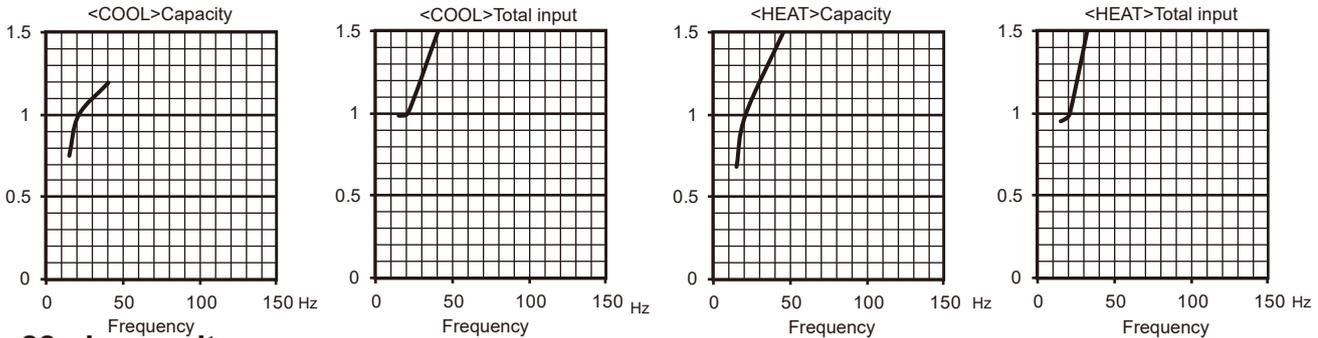
## 15-class unit



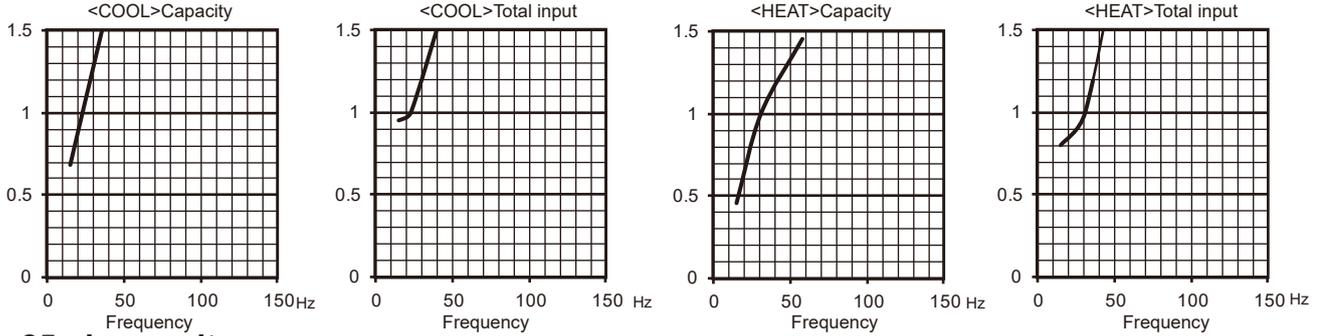
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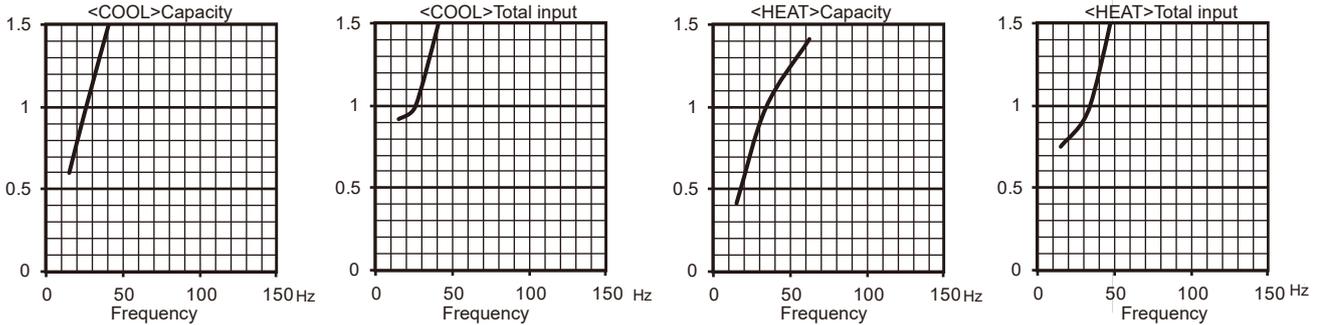
## 20-class unit



## 22-class unit

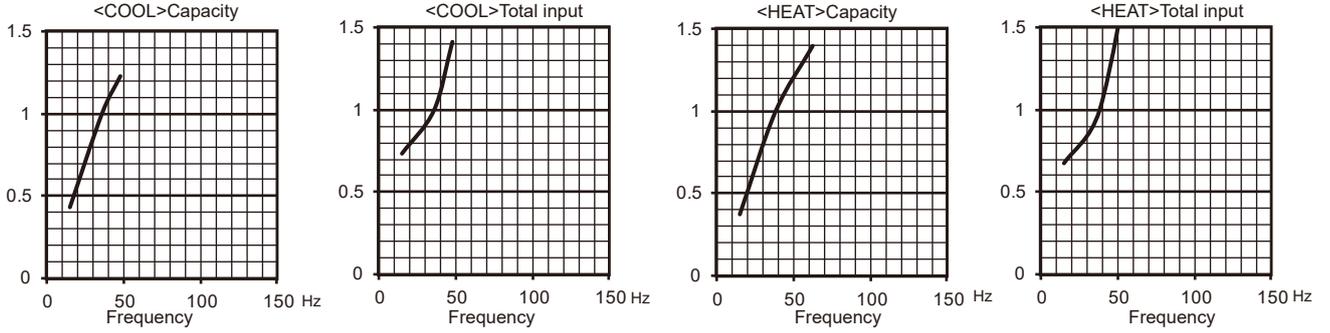


## 25-class unit

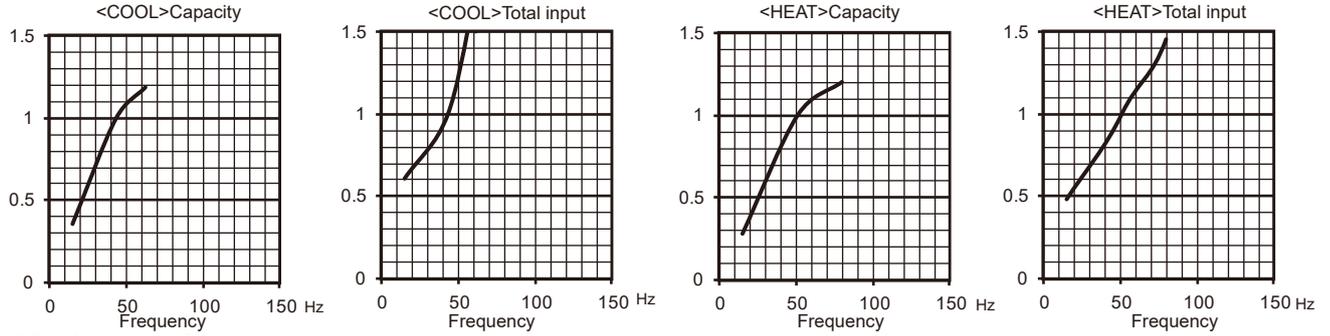


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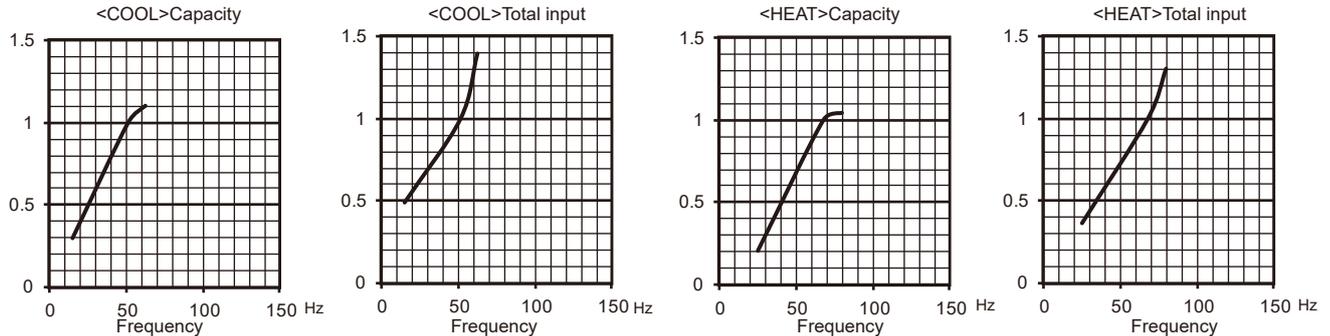
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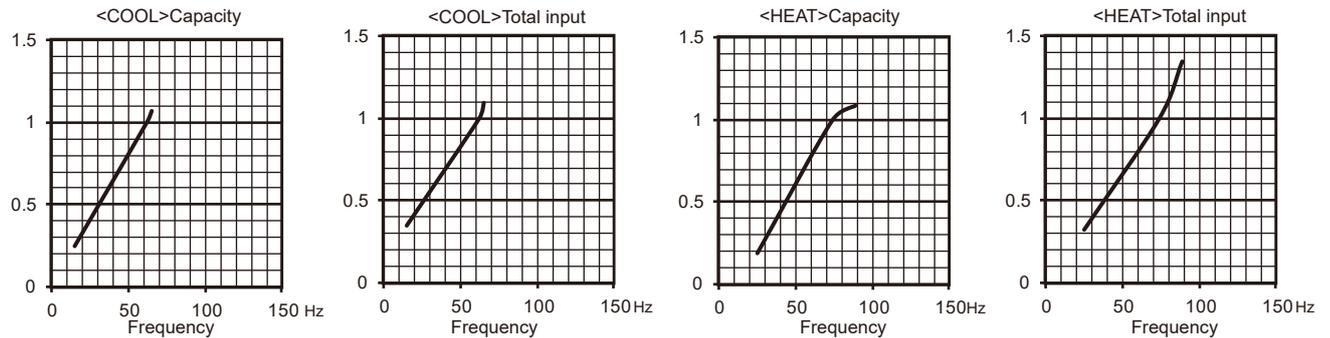
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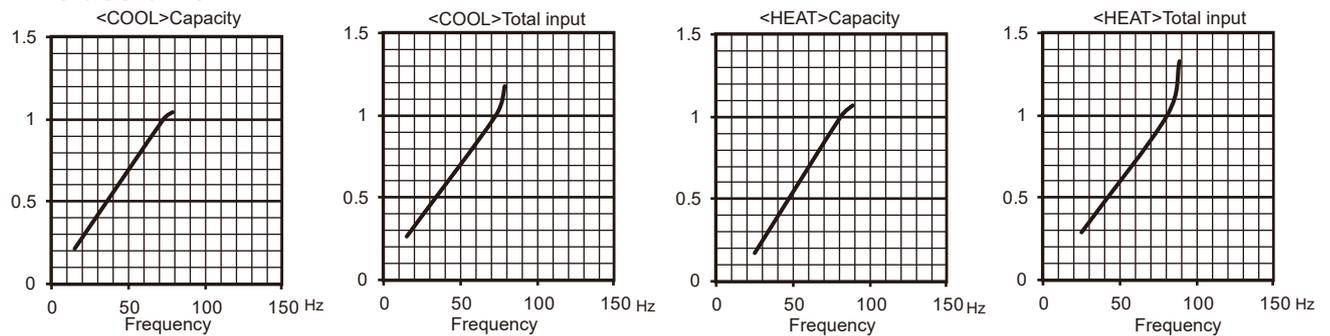
## 50-class unit



## 60-class unit

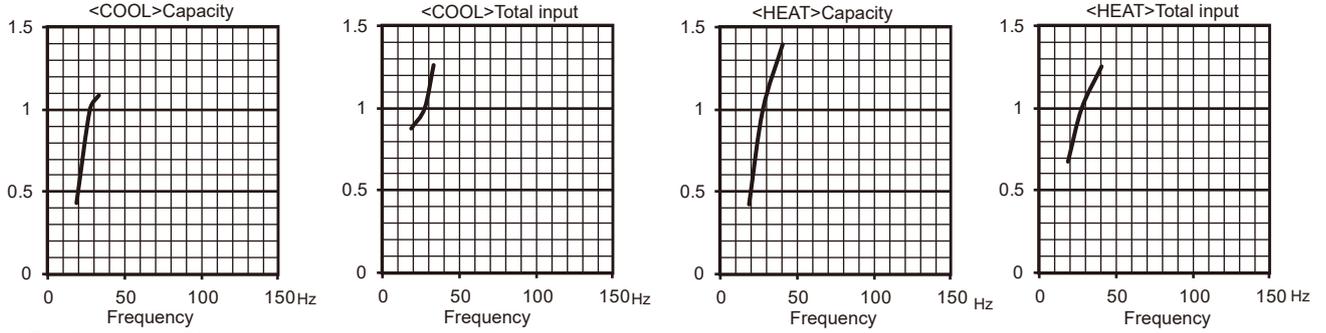


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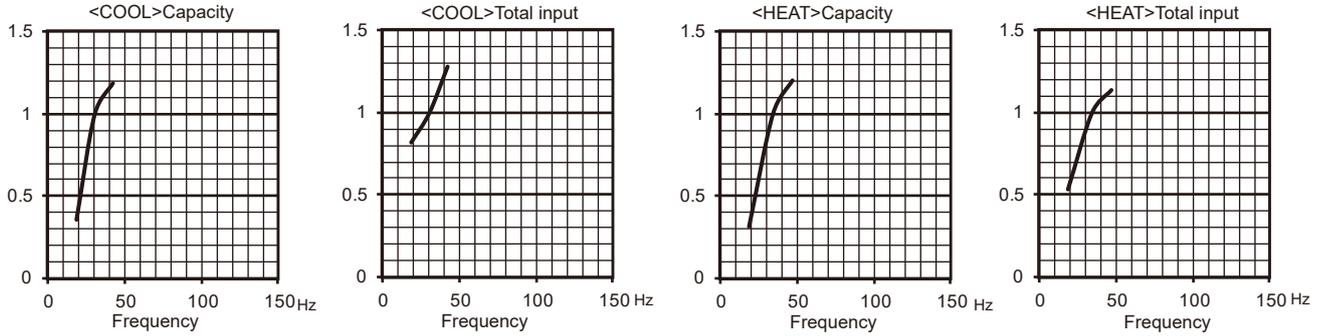




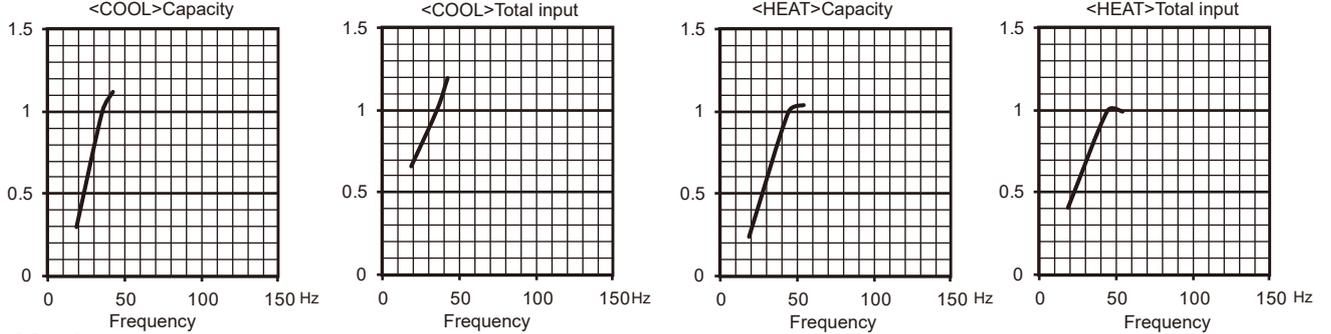
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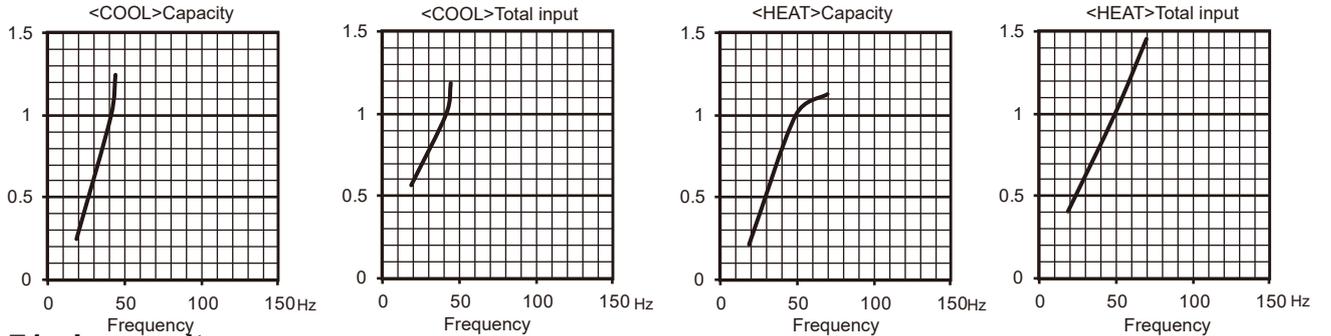
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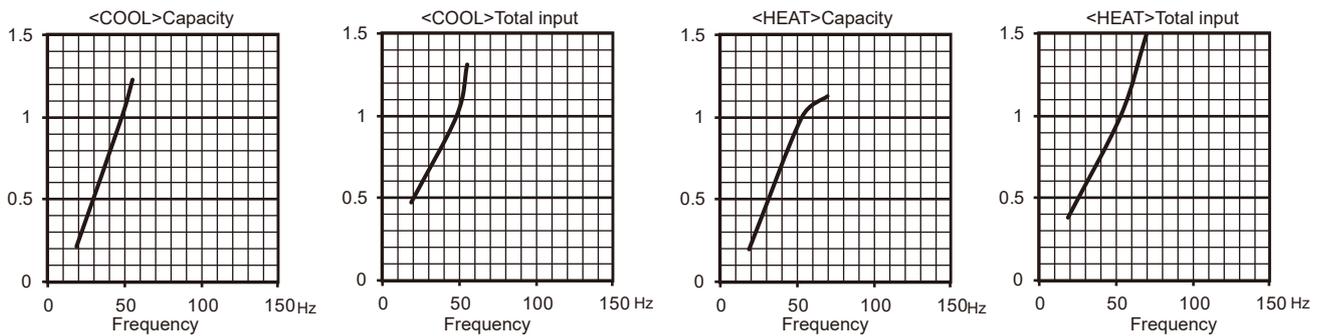
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**60-class unit**

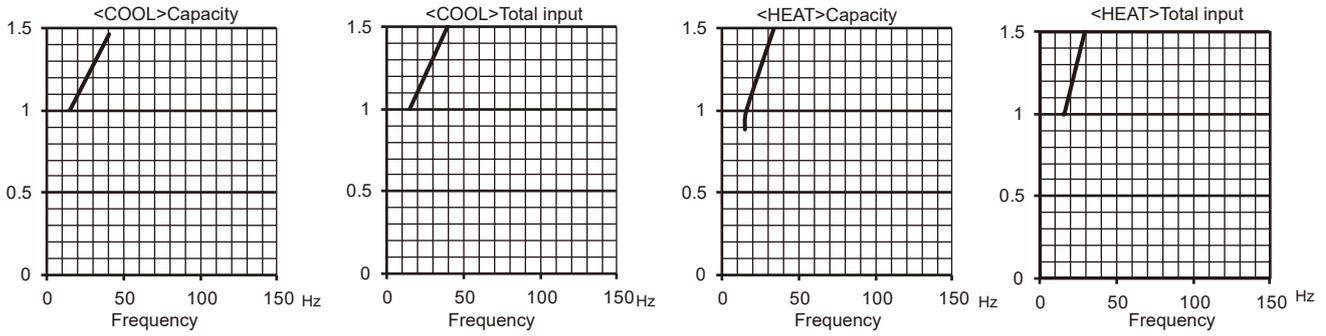


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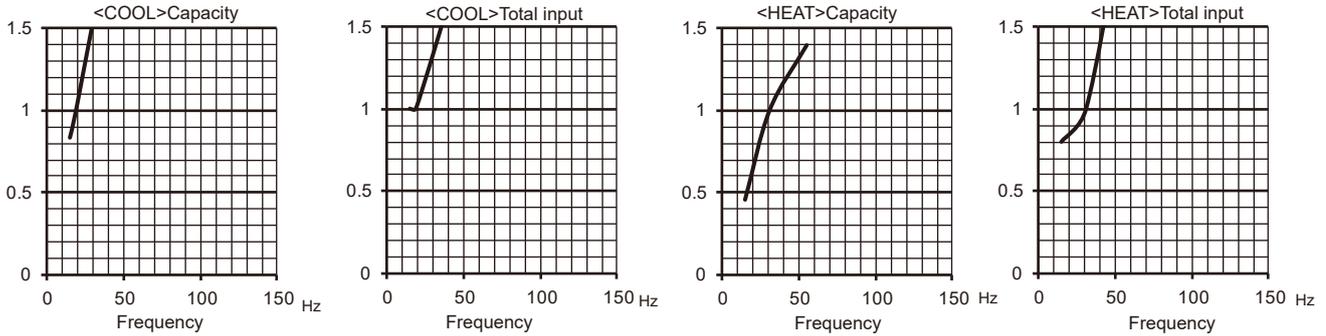


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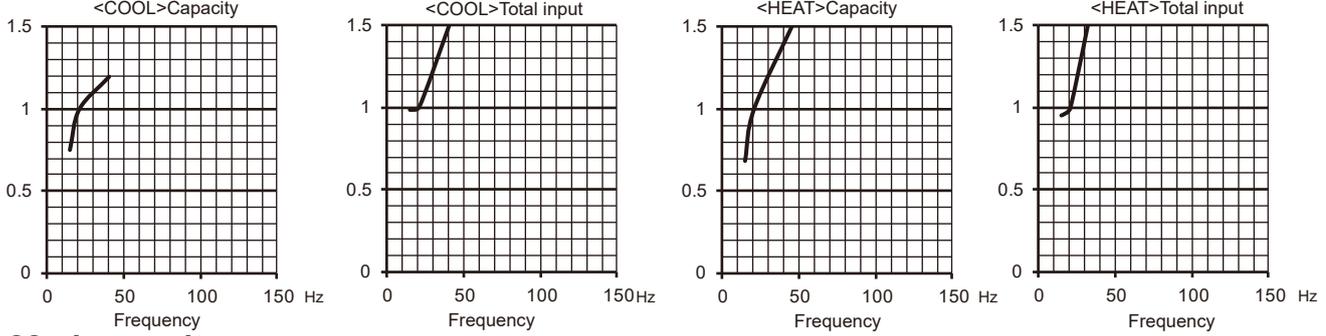
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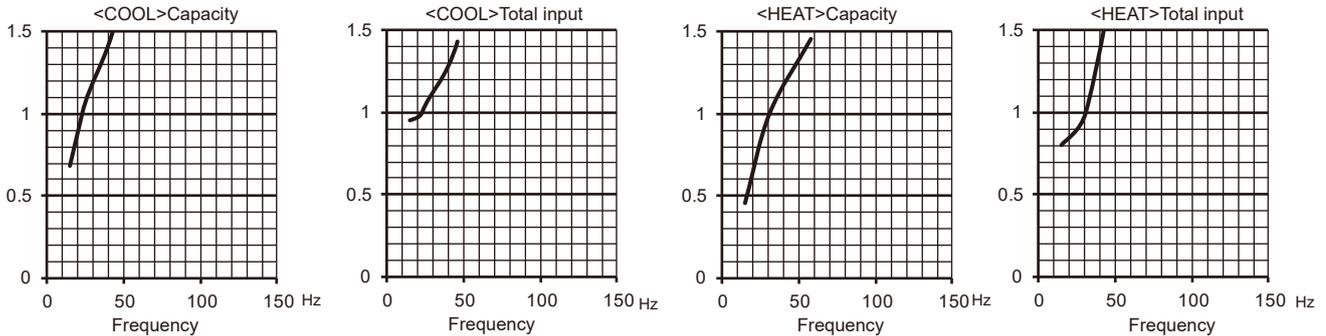
## 18-class unit



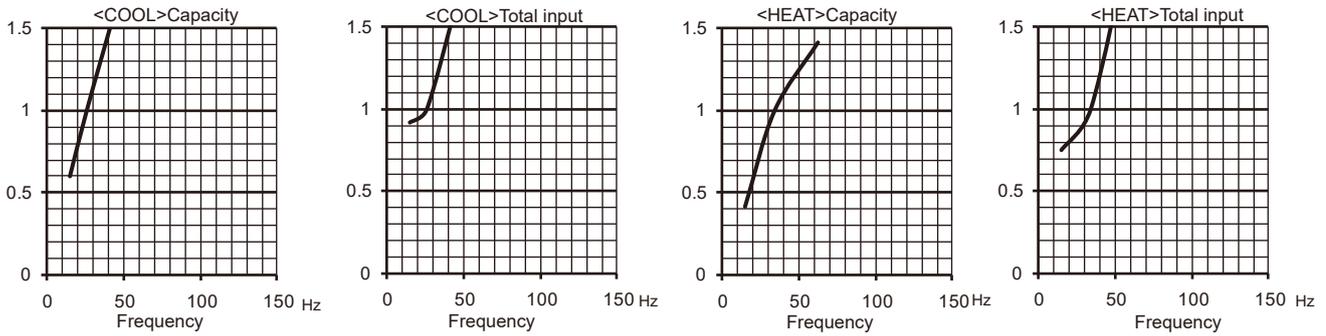
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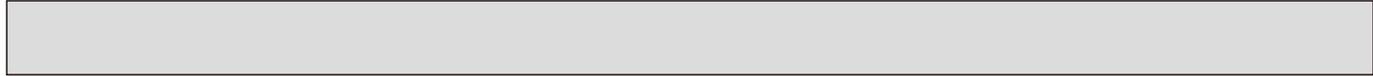


## 22-class unit



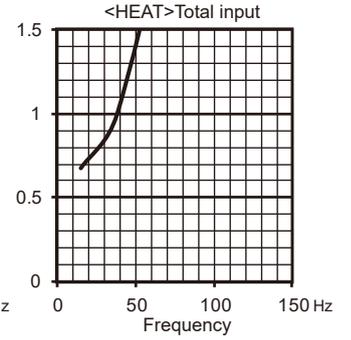
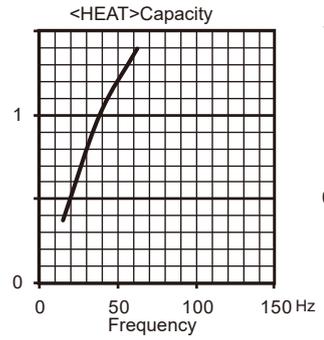
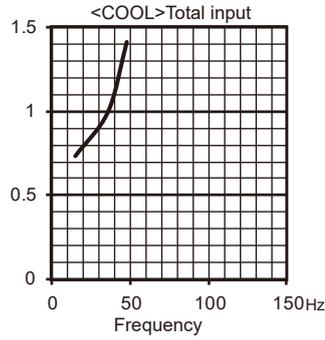
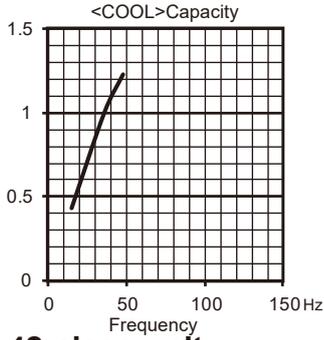
## 25-class unit



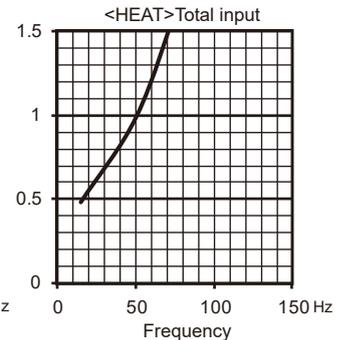
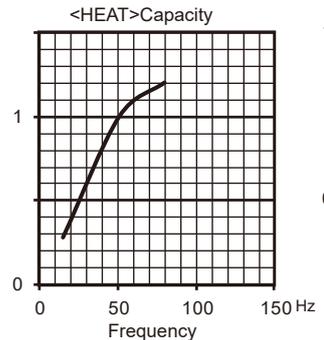
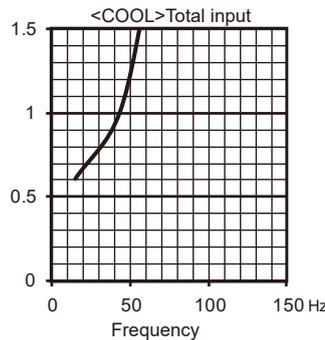
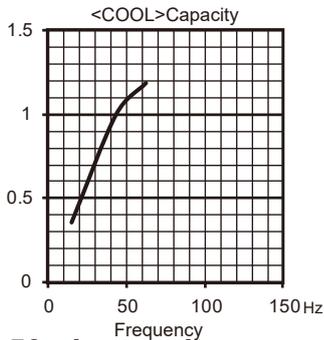


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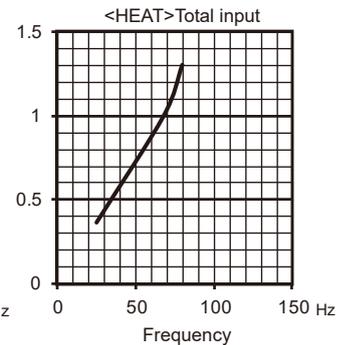
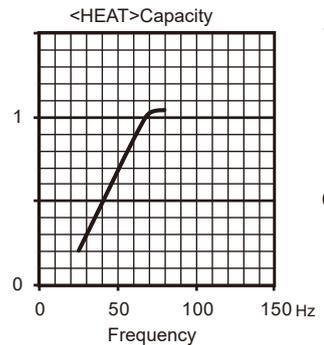
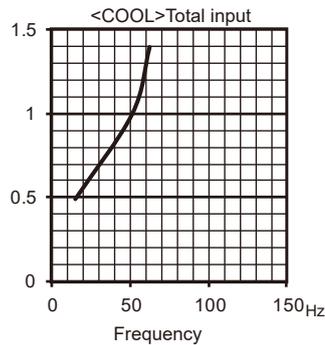
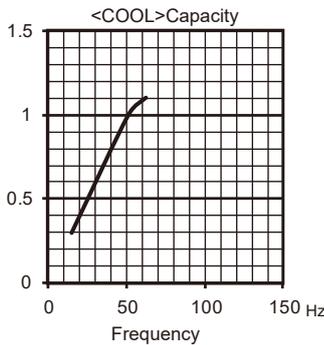
## 35-class unit



## 42-class unit



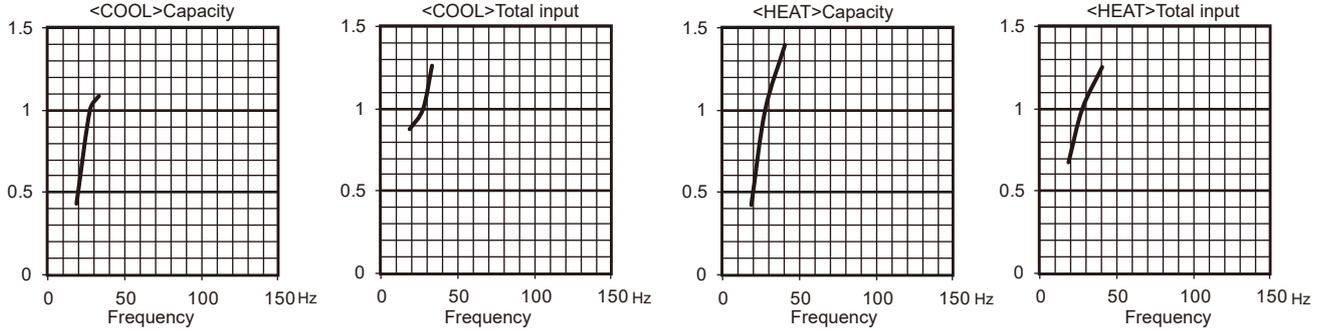
## 50-class unit



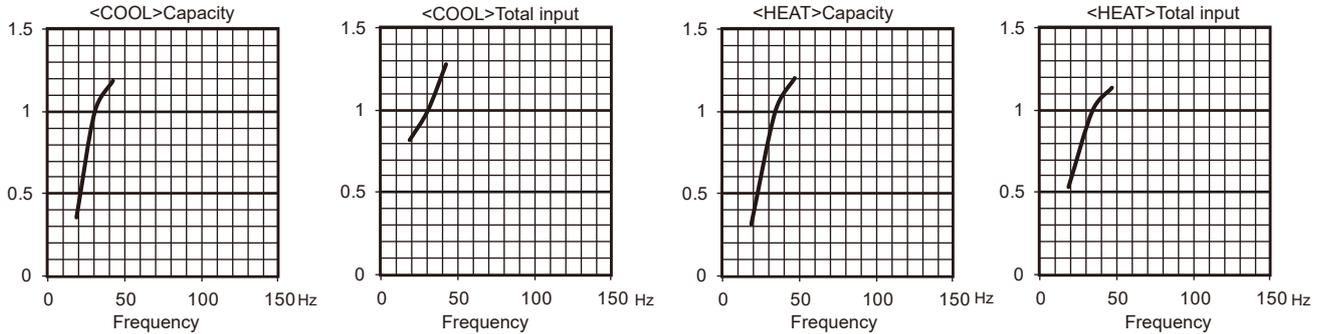


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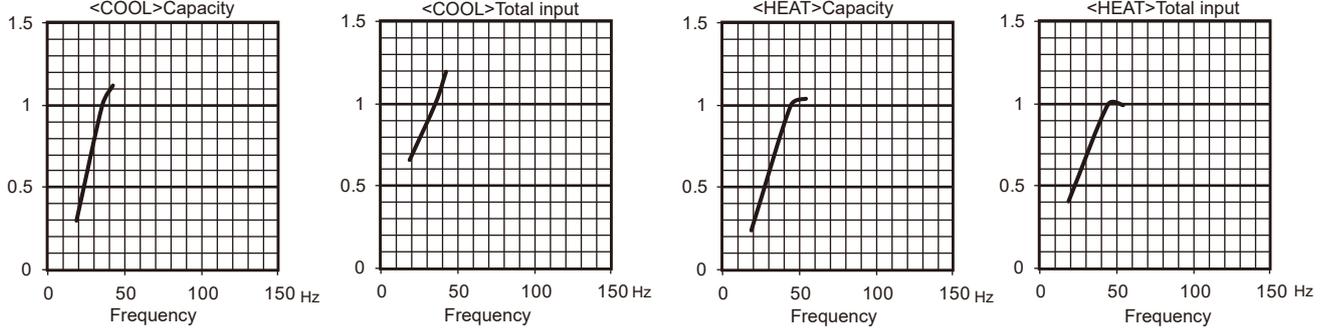
## 35-class unit



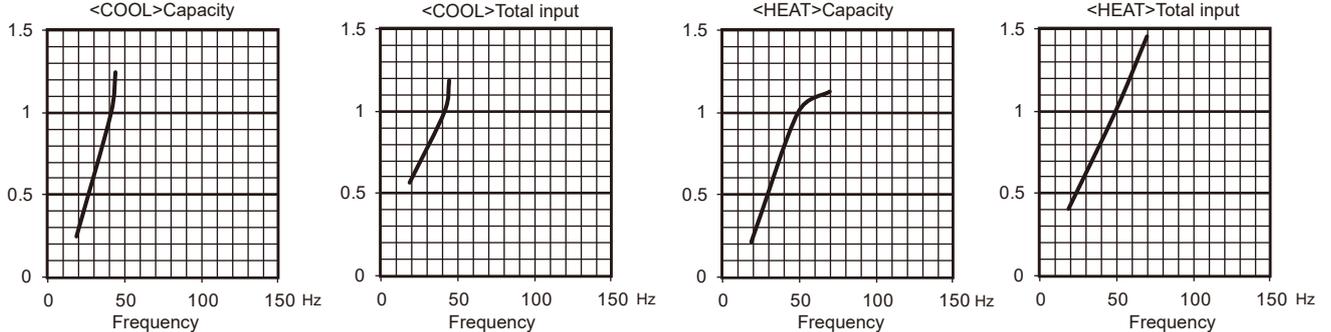
## 42-class unit



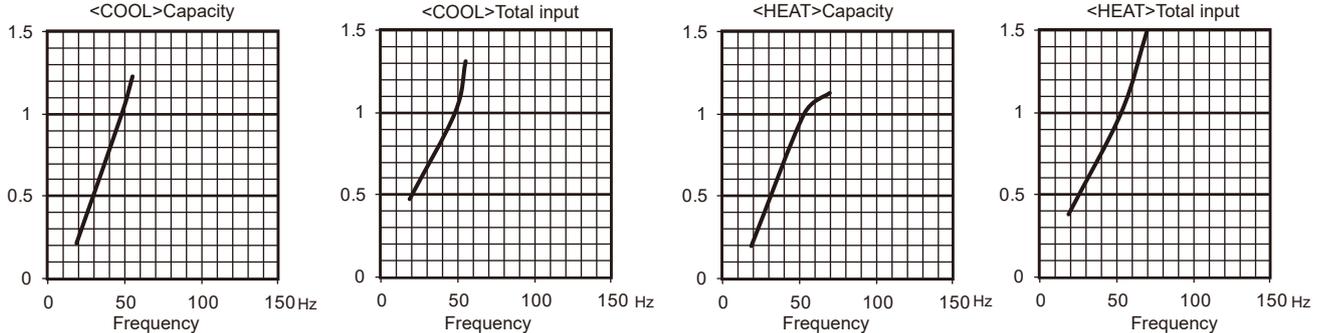
## 50-class unit



## 60-class unit



## 71-class unit



### 9-3. HOW TO OPERATE FIXED-FREQUENCY OPERATION <Test run operation>

1. Press EMERGENCY OPERATION switch to start COOL or HEAT mode (COOL : Press once, HEAT : Press twice).
2. Test run operation starts and continues to operate for 30 minutes.
3. Compressor operates at rated frequency.
4. Indoor fan operates at High speed.
5. After 30 minutes, test run operation finishes and EMERGENCY OPERATION starts (Operation frequency of compressor varies).
6. To cancel test run operation or EMERGENCY OPERATION, press EMERGENCY OPERATION switch or any button on remote controller.

### 9-4. OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT CURVE (single operation)

**NOTE:** The unit of pressure has been changed to MPa on the international system of units (SI unit system).  
The conversion factor is : **1 (MPa [Gauge]) = 10.2 (kgf/cm<sup>2</sup> [Gauge])**

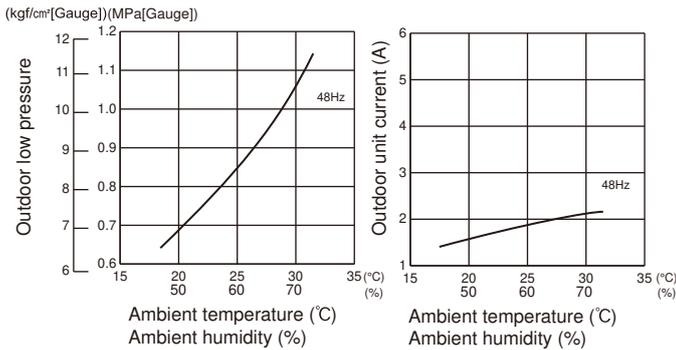
#### (1) COOL operation

- ① Both indoor and outdoor units are under the same temperature/humidity condition.
- ② Operation : TEST RUN OPERATION (Refer to 9-3.)

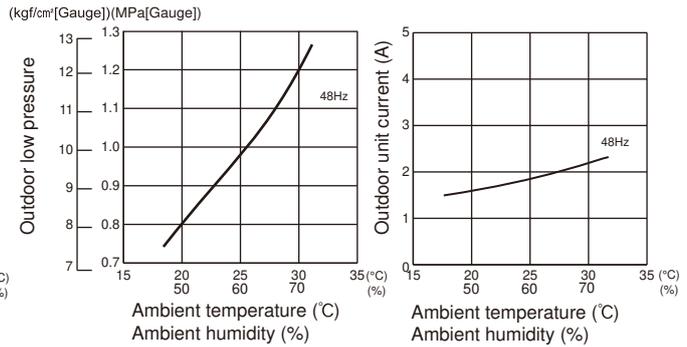
Dry-bulb temperature (°C)	Relative humidity (%)
20	50
25	60
30	70

#### MXZ-2F33VF MXZ-2F33VF2 MXZ-2F33VF3

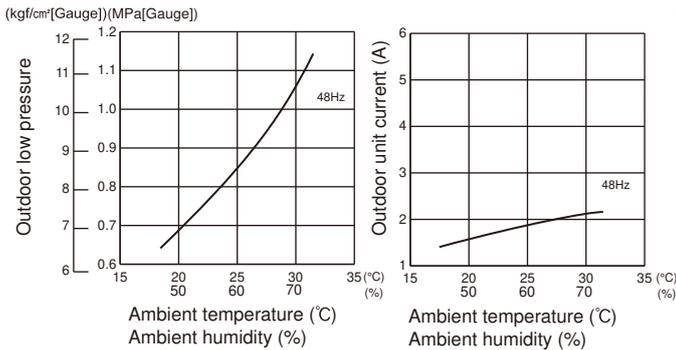
##### 15-class unit



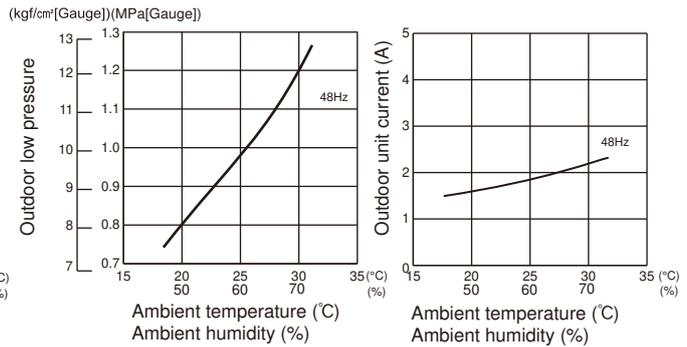
##### 18-class unit



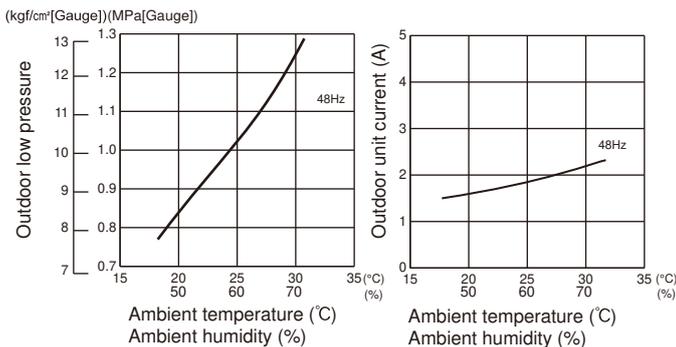
##### 20-class unit



##### 22-class unit

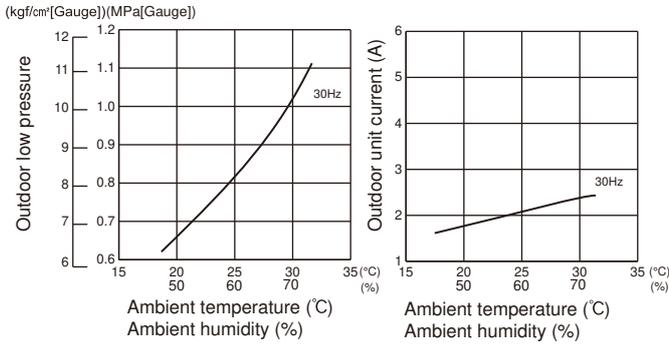


##### 25-class unit

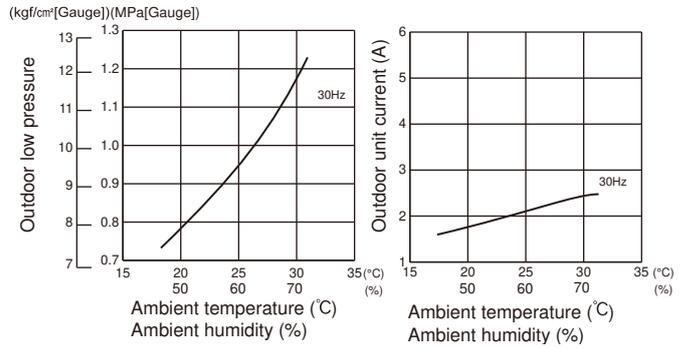


**MXZ-2F42VF MXZ-2F42VF2 MXZ-2F42VF3**

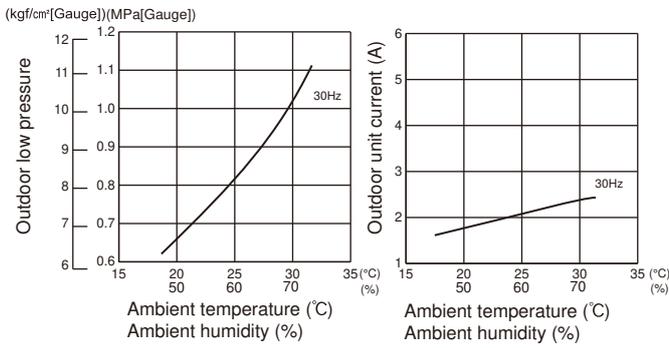
**15-class unit**



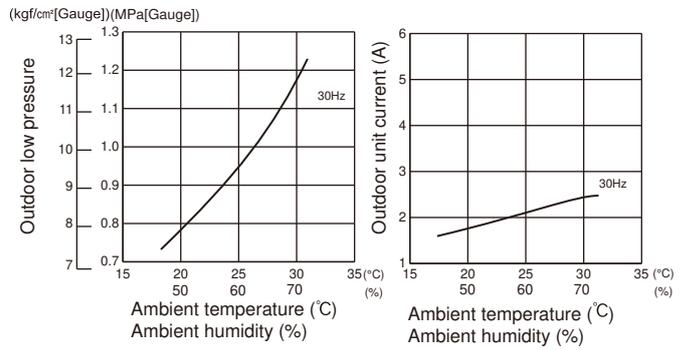
**18-class unit**



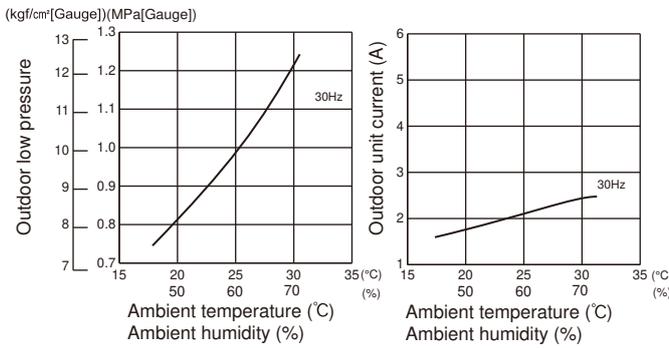
**20-class unit**



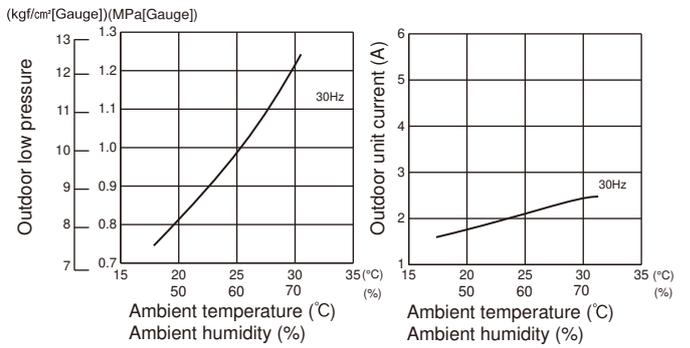
**22-class unit**



**25-class unit**



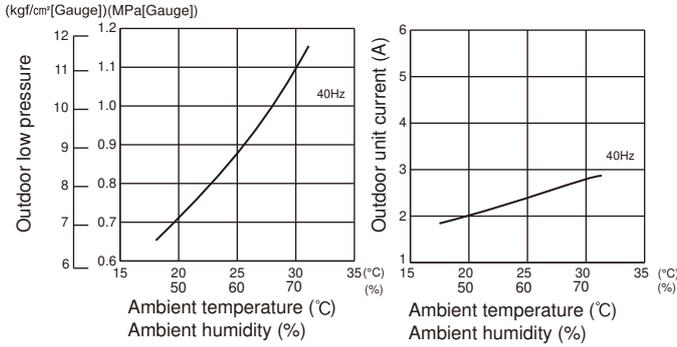
**35-class unit**



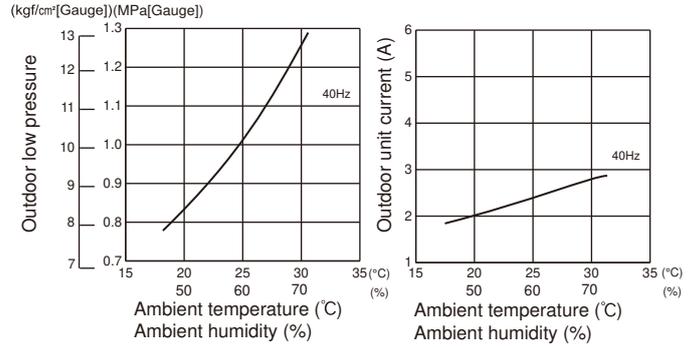


**MXZ-3F54VF MXZ-3F54VF2 MXZ-3F54VF3**

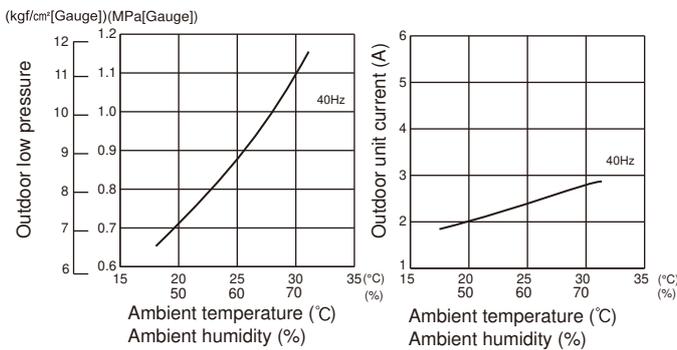
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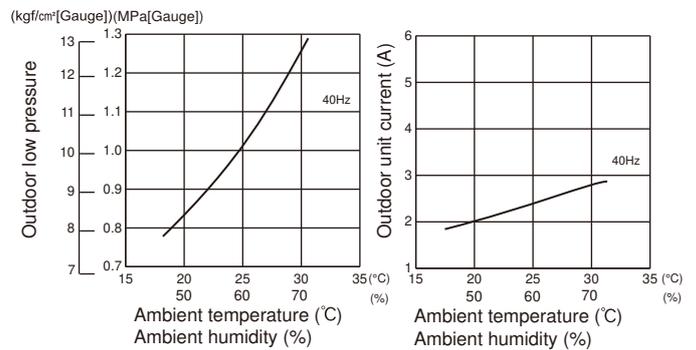
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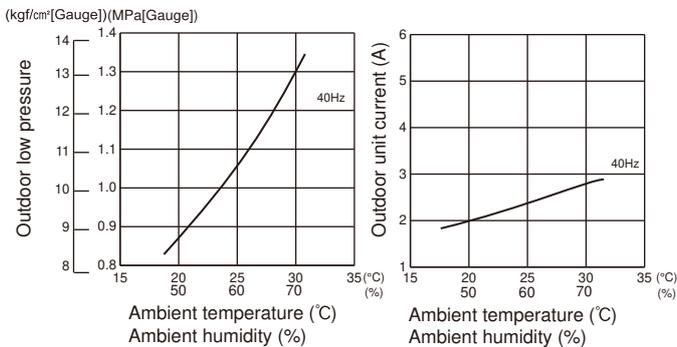
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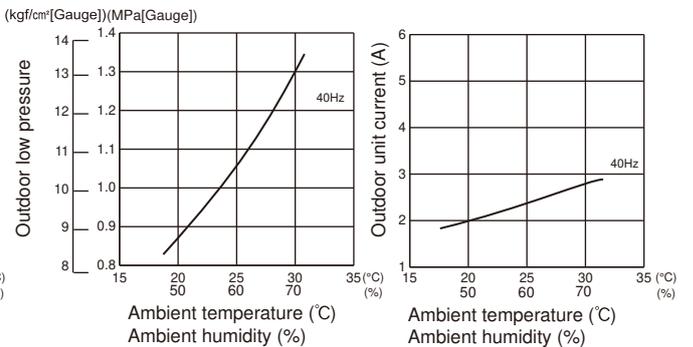
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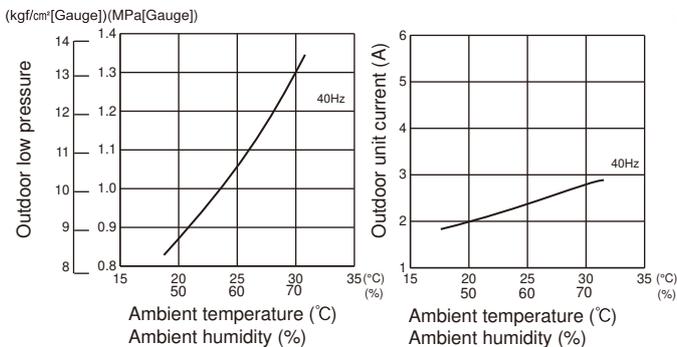
**25-class unit**



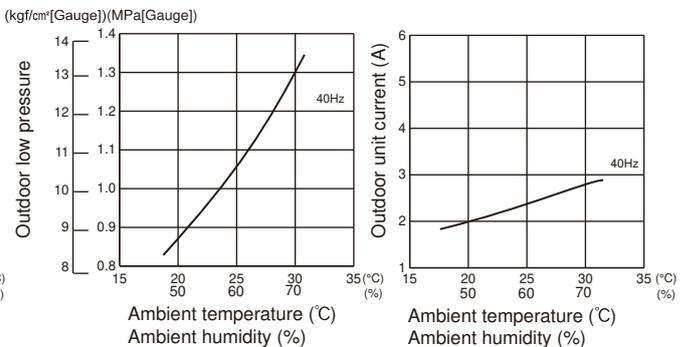
**35-class unit**



**42-class unit**

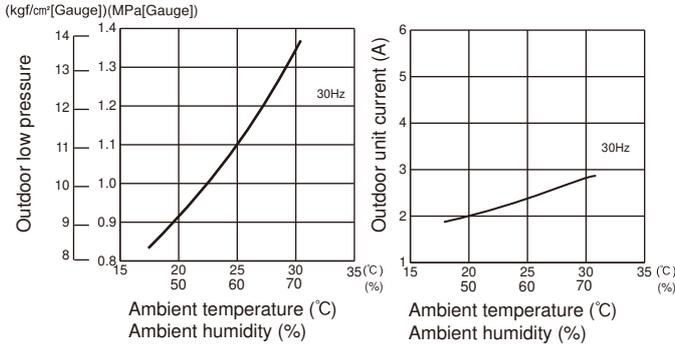


**50-class unit**

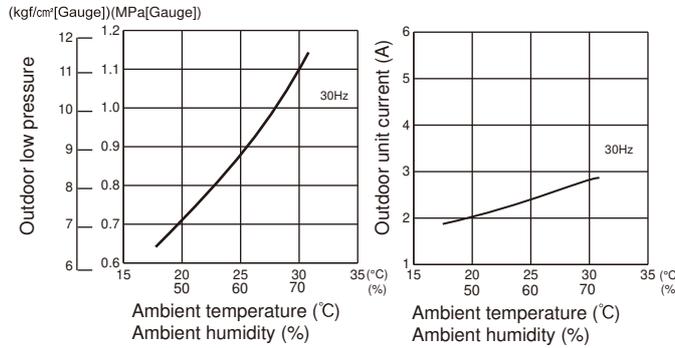




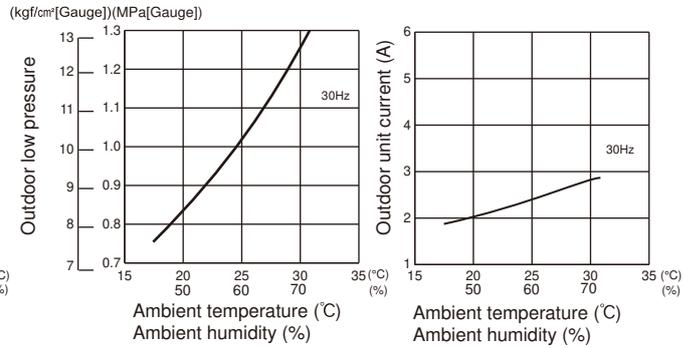
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**60-class unit**



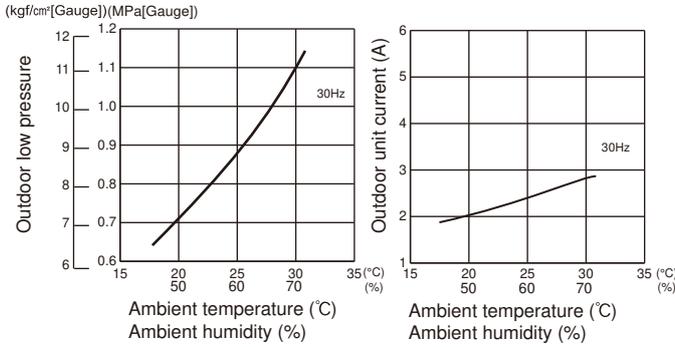
**MXZ-4F80VF2 MXZ-4F80VF3**  
**15-class unit**



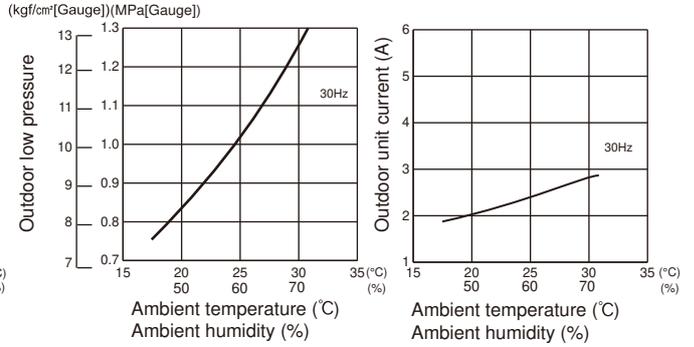
**18-class unit**



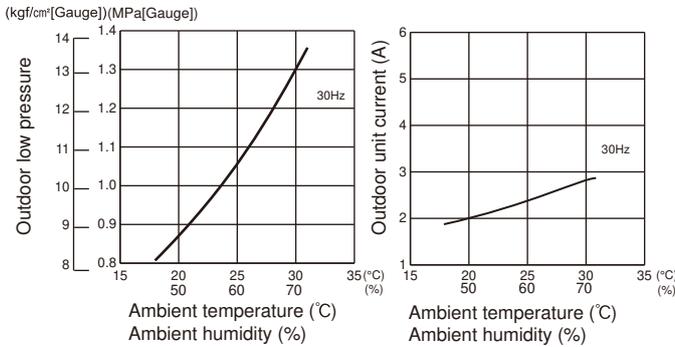
**20-class unit**



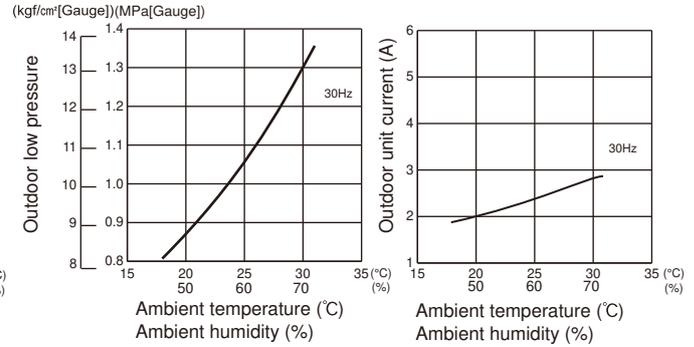
**22-class unit**



**25-class unit**

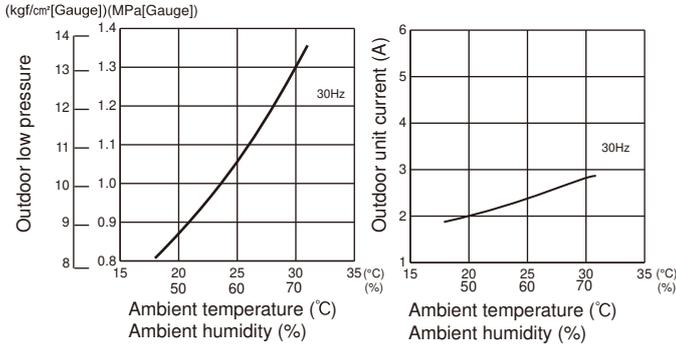


**35-class unit**

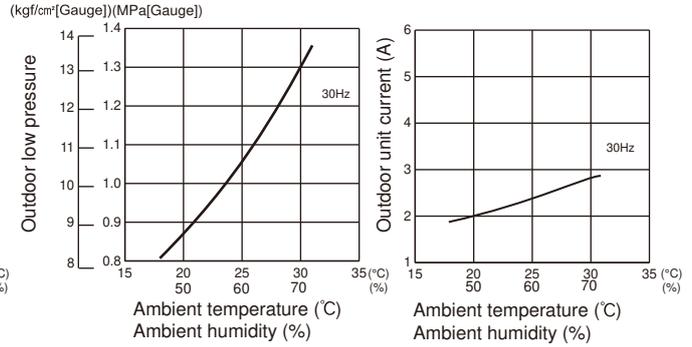


## MXZ-4F80VF2 MXZ-4F80VF3

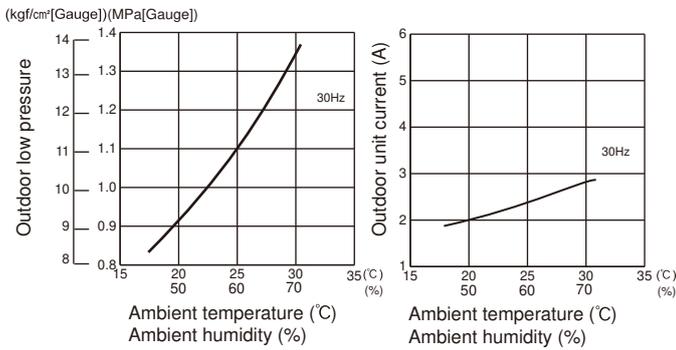
### 42-class unit



### 50-class unit

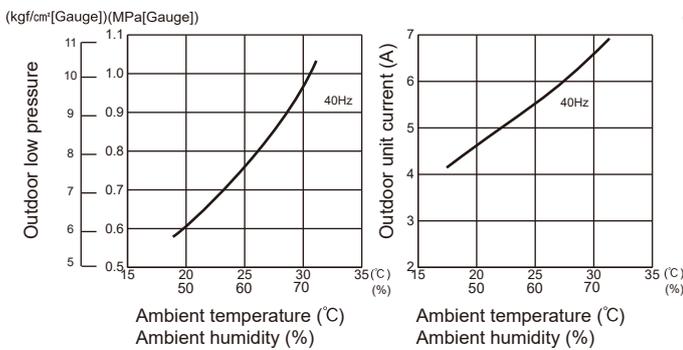


### 60-class unit

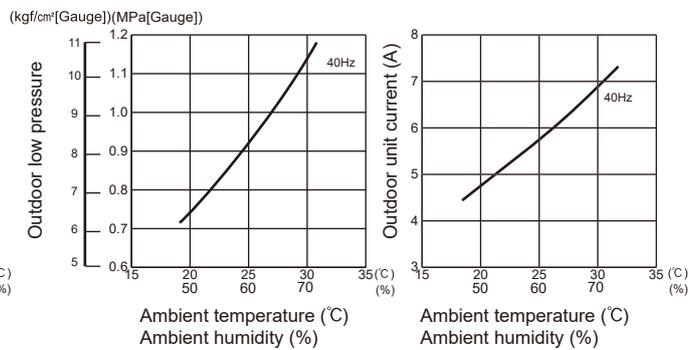


## MXZ-4F83VF

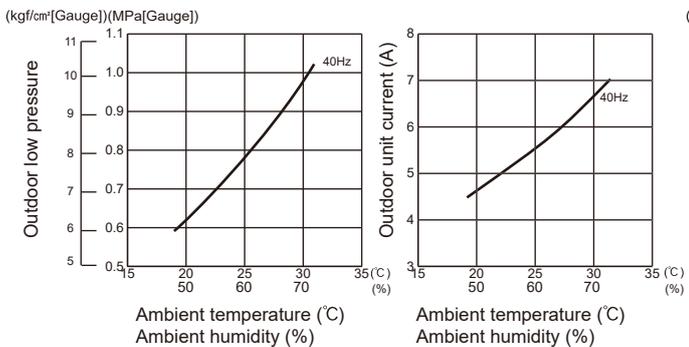
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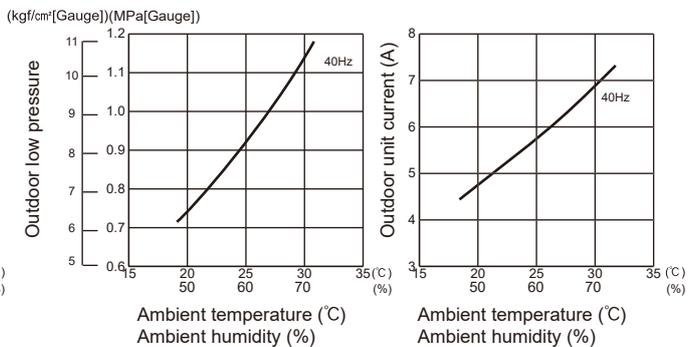
### 18-class unit



### 20-class unit



### 22-class unit

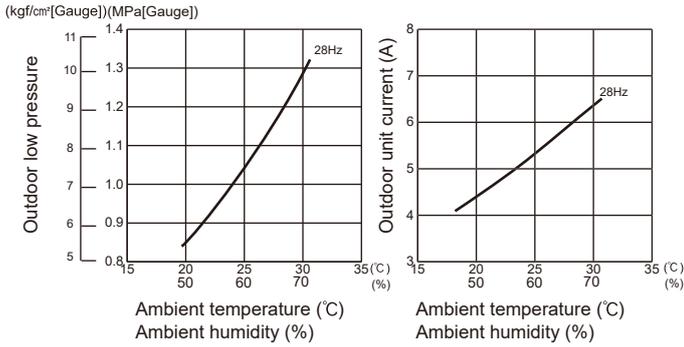




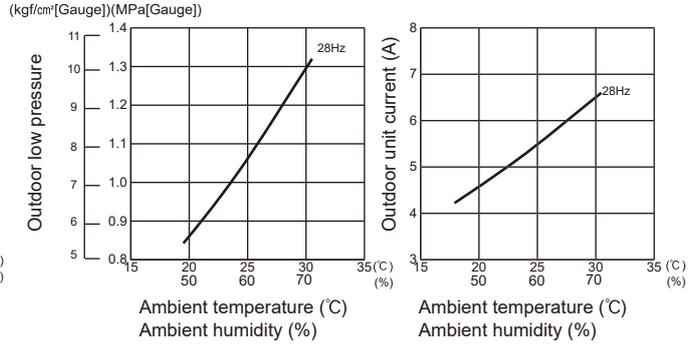




### 60-class unit

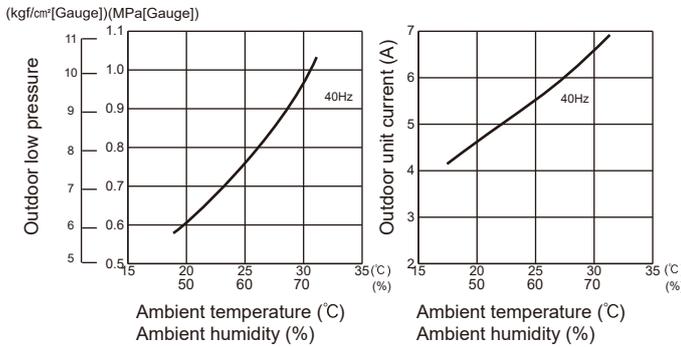


### 71-class unit

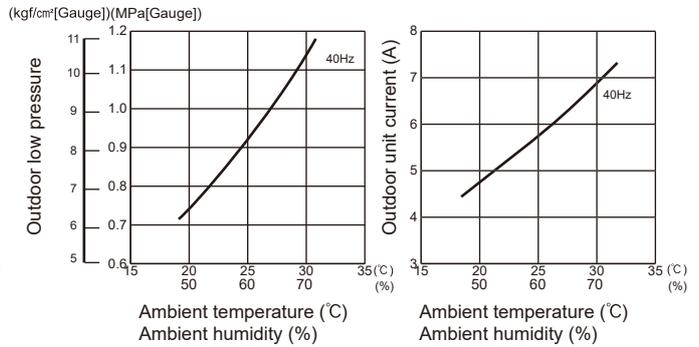


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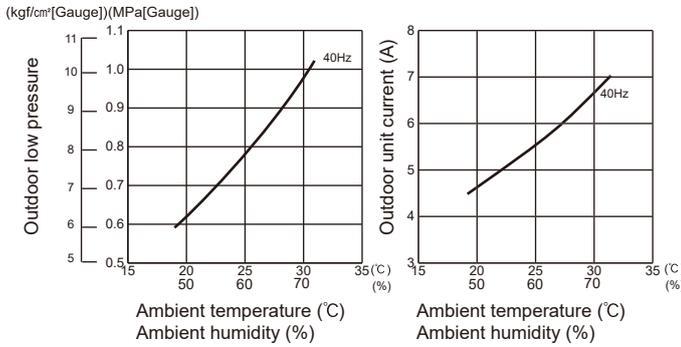
#### 15-class unit



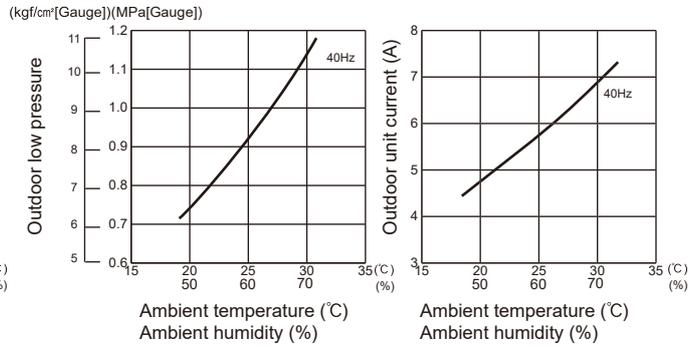
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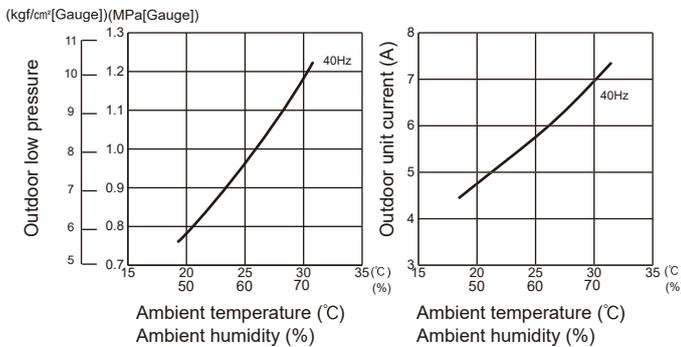
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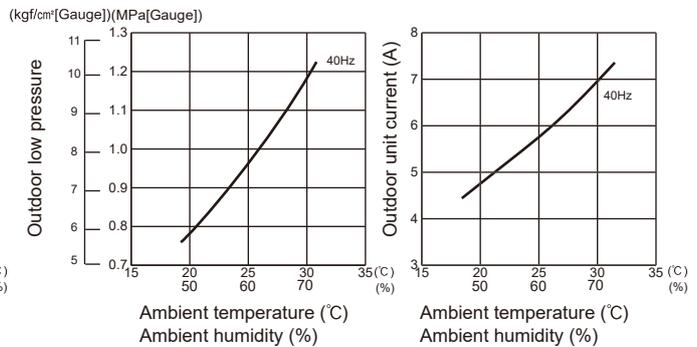
#### 22-class unit



#### 25-class unit

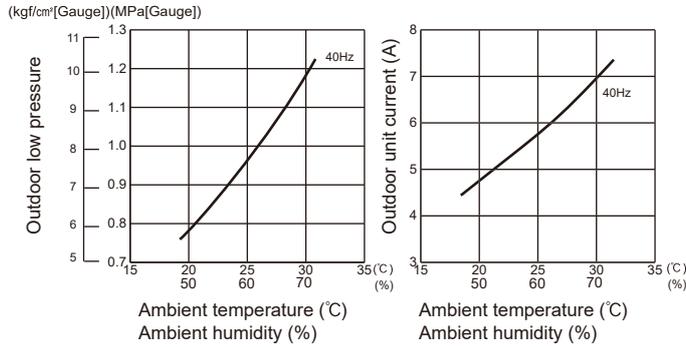


#### 35-class unit

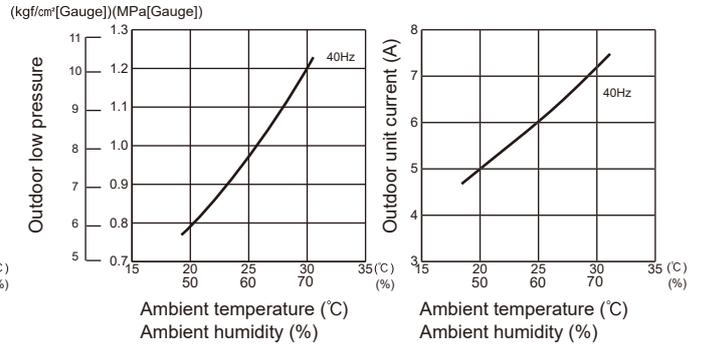


## MXZ-2F53VFHZ

### 42-class unit

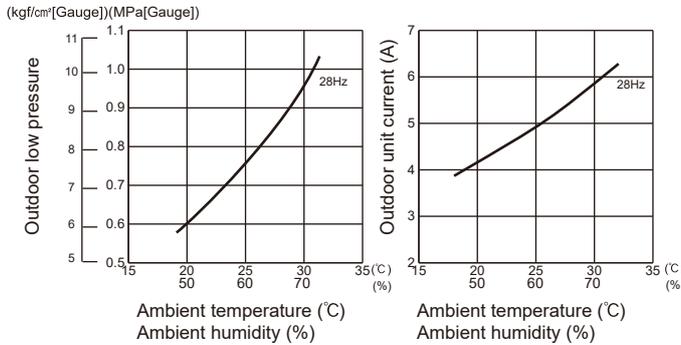


### 50-class unit

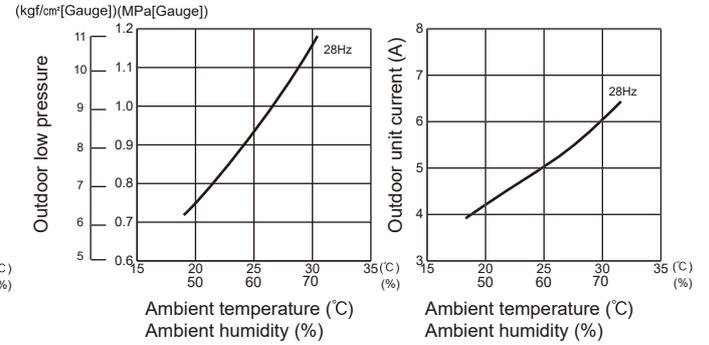


## MXZ-4F83VFHZ

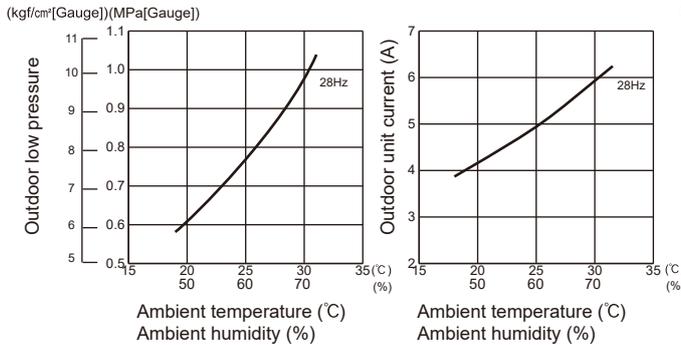
### 15-class unit



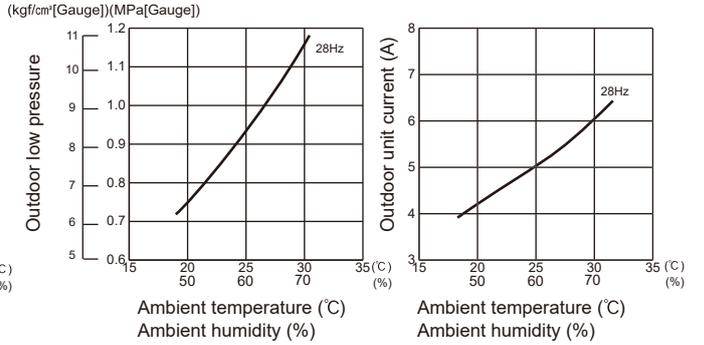
### 18-class unit



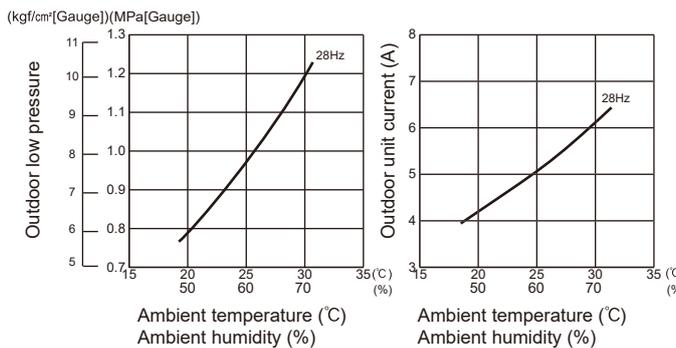
### 20-class unit



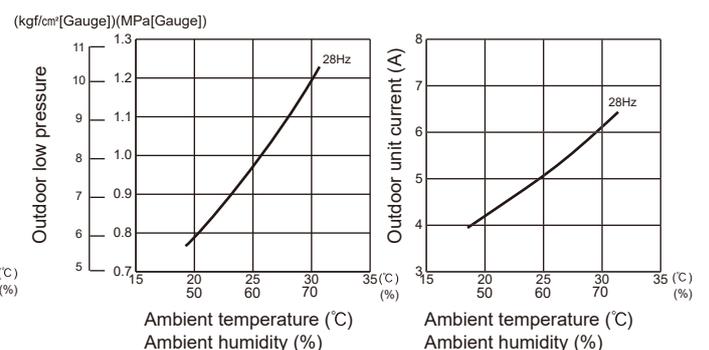
### 22-class unit



### 25-class unit

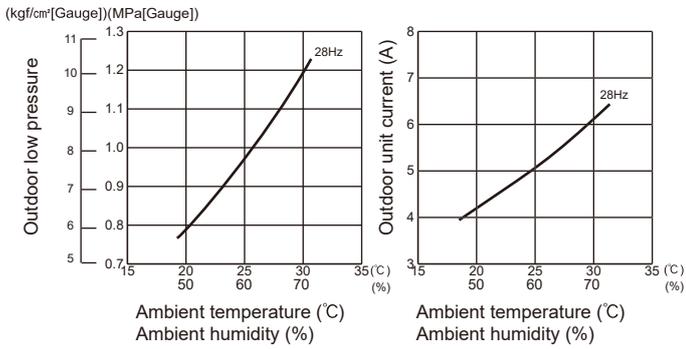


### 35-class unit

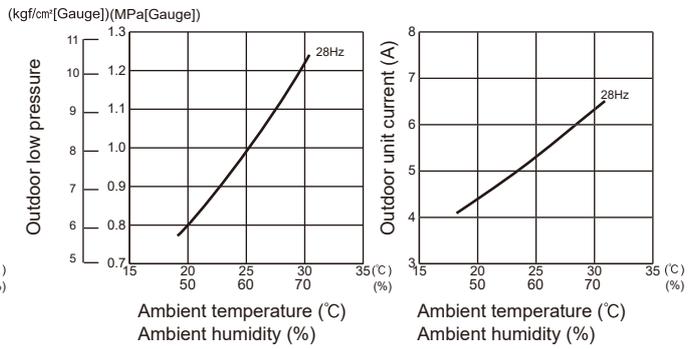


# MXZ-4F83VFHZ

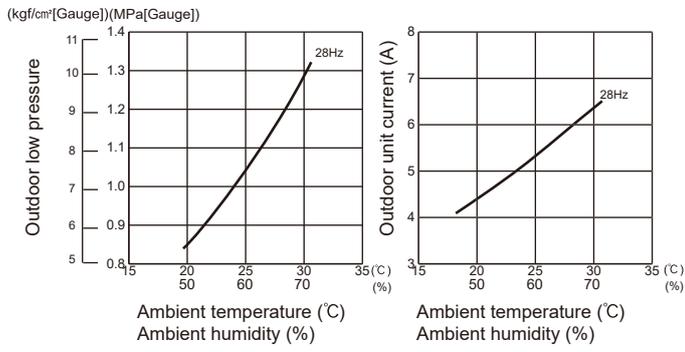
## 42-class unit



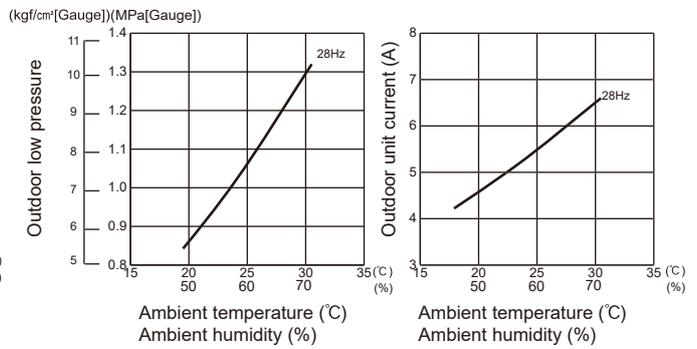
## 50-class unit



## 60-class unit



## 71-class unit



## (2) HEAT operation

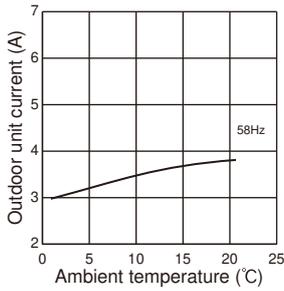
① Condition :

	Indoor	Outdoor			
Dry bulb temperature (°C)	20.0	2	7	15	20.0
Wet bulb temperature (°C)	14.5	1	6	12	14.5

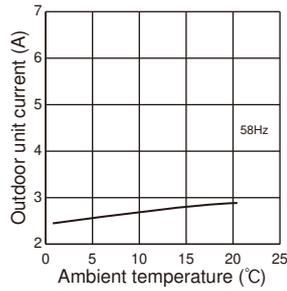
② Operation : TEST RUN OPERATION (Refer to 9-3.)

### MXZ-2F33VF MXZ-2F33VF2 MXZ-2F33VF3

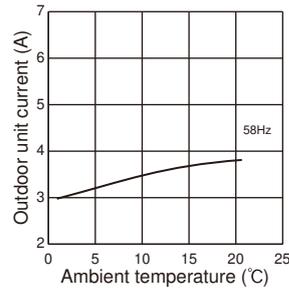
#### 15-class unit



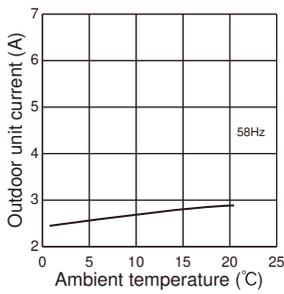
#### 18-class unit



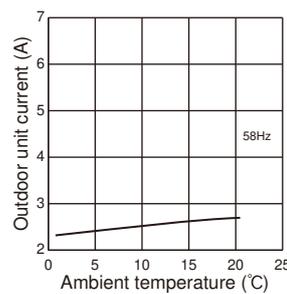
#### 20-class unit



#### 22-class unit

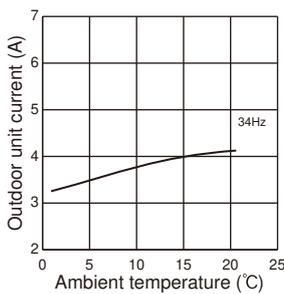


#### 25-class unit

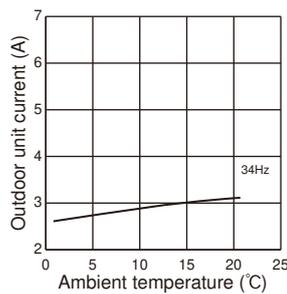


### MXZ-2F42VF MXZ-2F42VF2 MXZ-2F42VF3

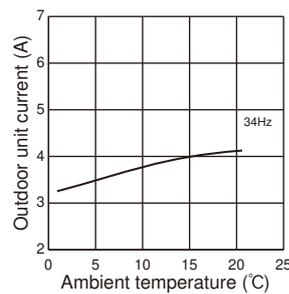
#### 15-class unit



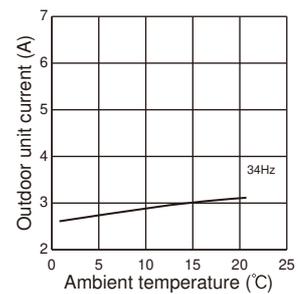
#### 18-class unit



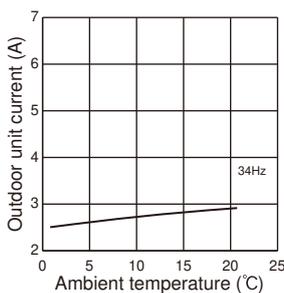
#### 20-class unit



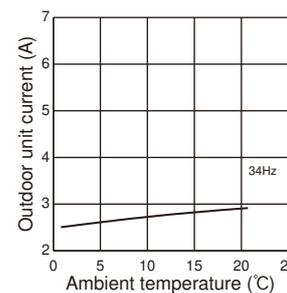
#### 22-class unit



#### 25-class unit

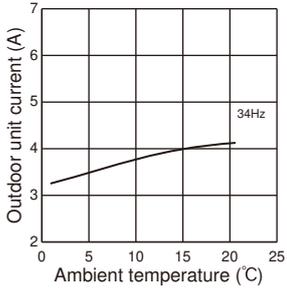


#### 35-class unit

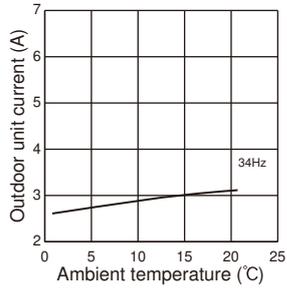


**MXZ-2F53VF MXZ-2F53VF2 MXZ-2F53VF3 MXZ-2F53VFH MXZ-2F53VFH2 MXZ-2F53VFH3**

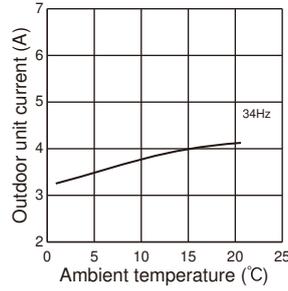
**15-class unit**



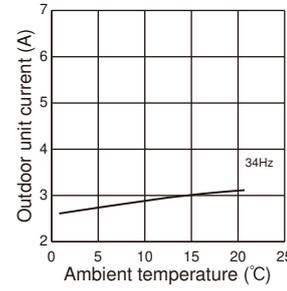
**18-class unit**



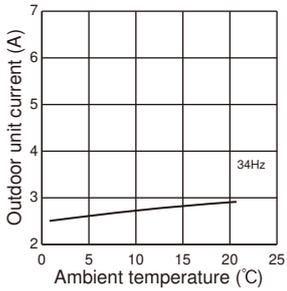
**20-class unit**



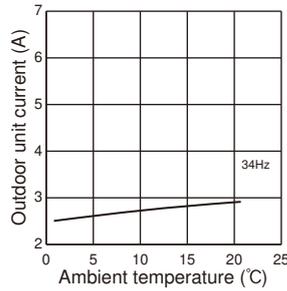
**22-class unit**



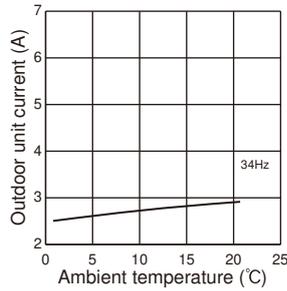
**25-class unit**



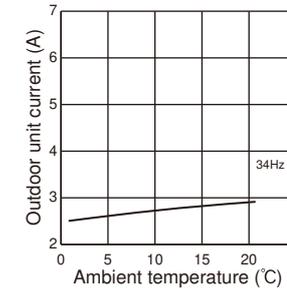
**35-class unit**



**42-class unit**

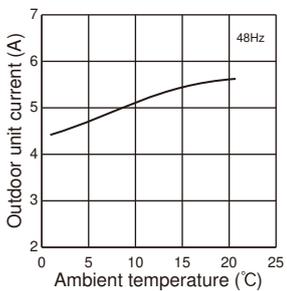


**50-class unit**

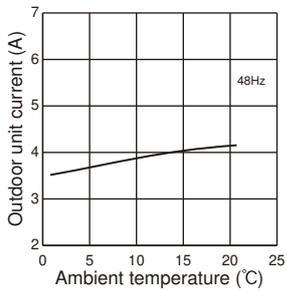


**MXZ-3F54VF MXZ-3F54VF2 MXZ-3F54VF3**

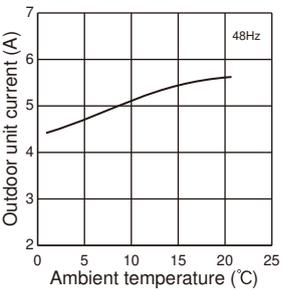
**15-class unit**



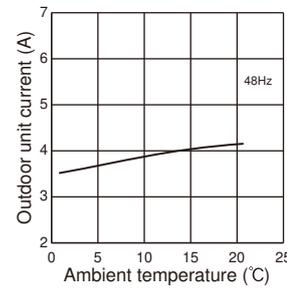
**18-class unit**



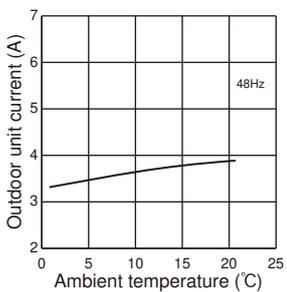
**20-class unit**



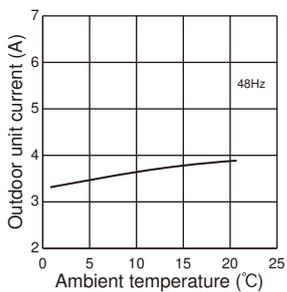
**22-class unit**



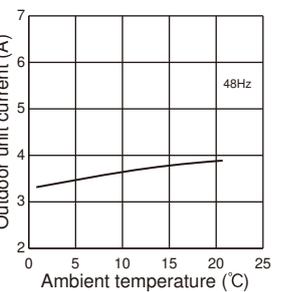
**25-class unit**



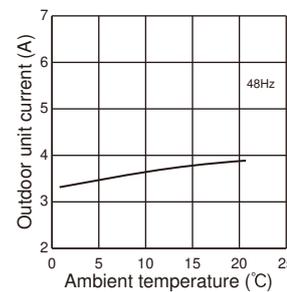
**35-class unit**



**42-class unit**

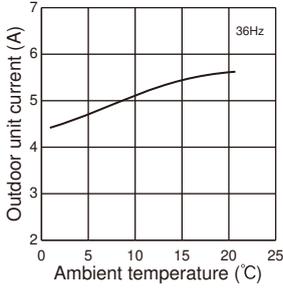


**50-class unit**

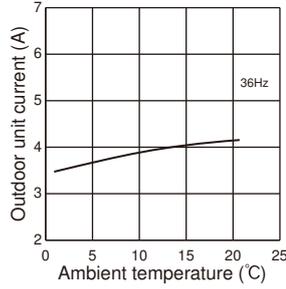


**MXZ-3F68VF MXZ-3F68VF2 MXZ-3F68VF3 MXZ-4F72VF MXZ-4F72VF2 MXZ-4F72VF3**

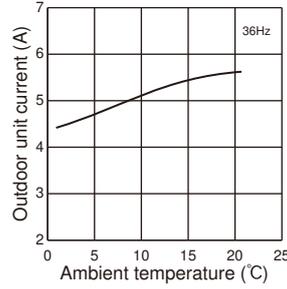
**15-class unit**



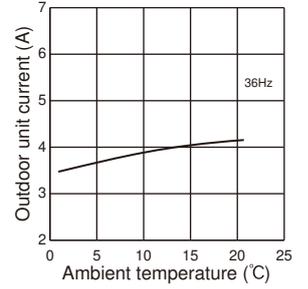
**18-class unit**



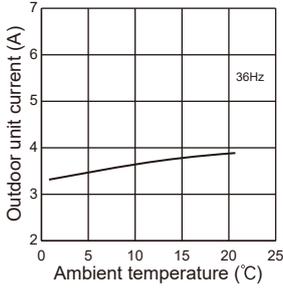
**20-class unit**



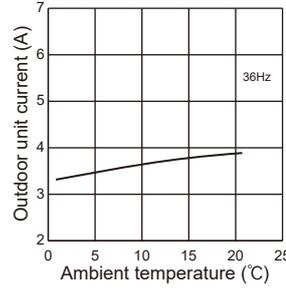
**22-class unit**



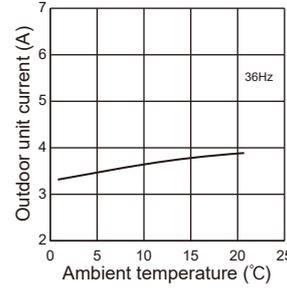
**25-class unit**



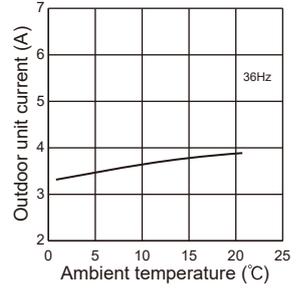
**35-class unit**



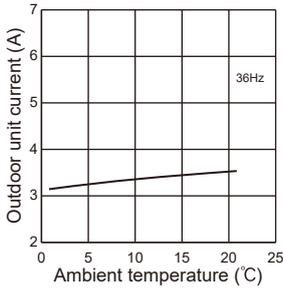
**42-class unit**



**50-class unit**

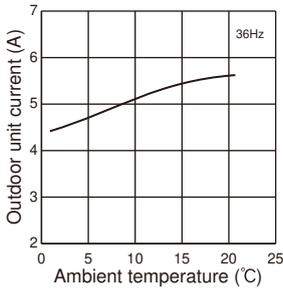


**60-class unit**

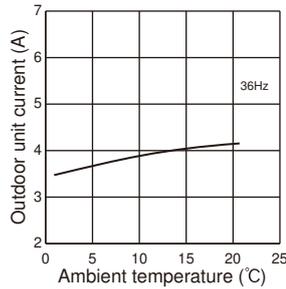


**MXZ-4F80VF2 MXZ-4F80VF3**

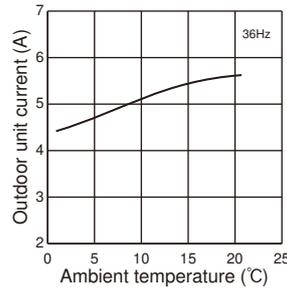
**15-class unit**



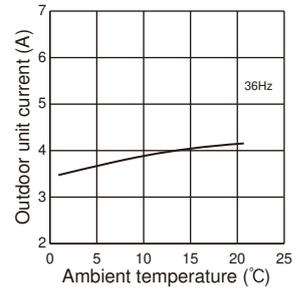
**18-class unit**



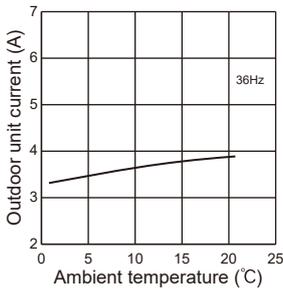
**20-class unit**



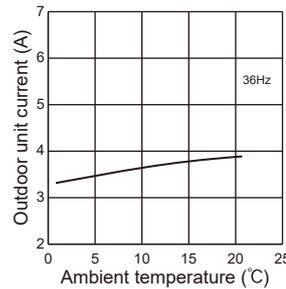
**22-class unit**



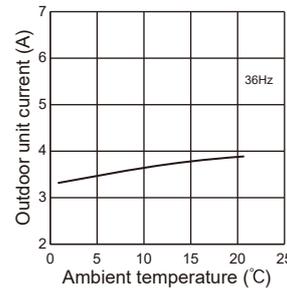
**25-class unit**



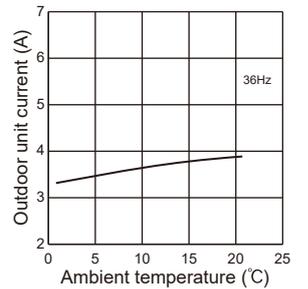
**35-class unit**



**42-class unit**

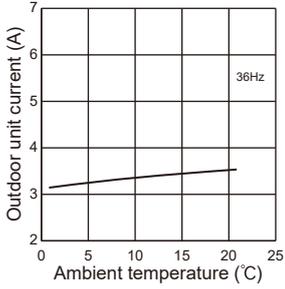


**50-class unit**



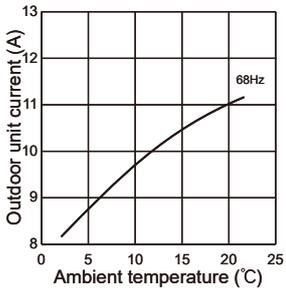
**MXZ-4F80VF2 MXZ-4F80VF3**

**60-class unit**

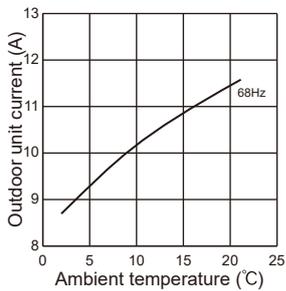


**MXZ-4F83VF**

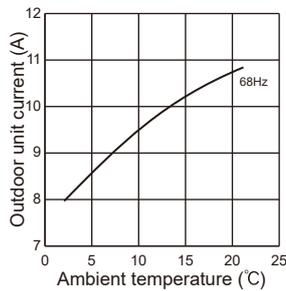
**15-class unit**



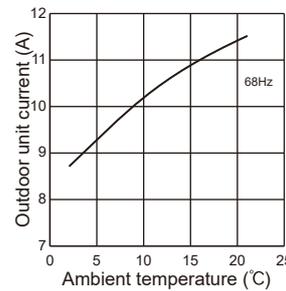
**18-class unit**



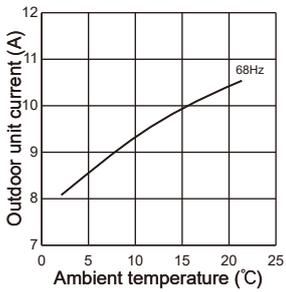
**20-class unit**



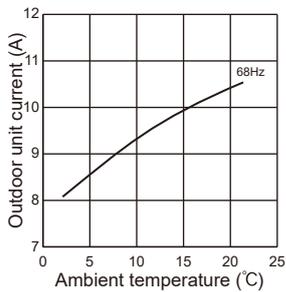
**22-class unit**



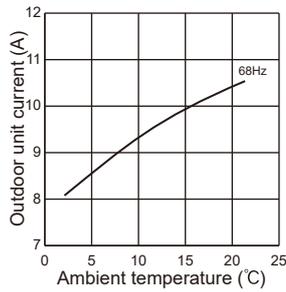
**25-class unit**



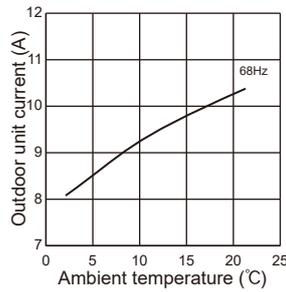
**35-class unit**



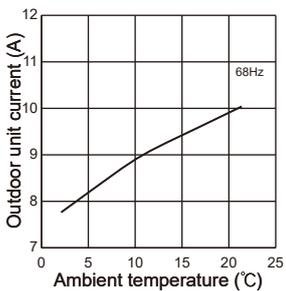
**42-class unit**



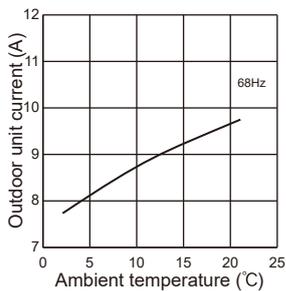
**50-class unit**



**60-class unit**

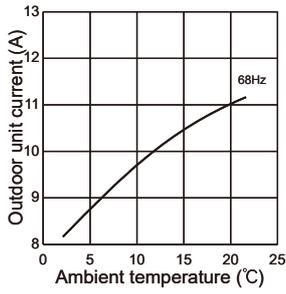


**71-class unit**

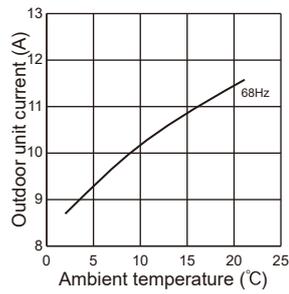


# MXZ-5F102VF

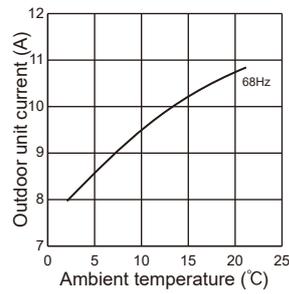
## 15-class unit



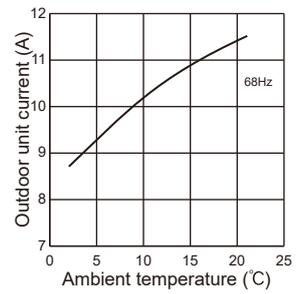
## 18-class unit



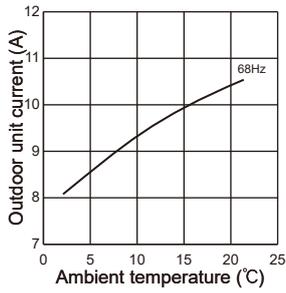
## 20-class unit



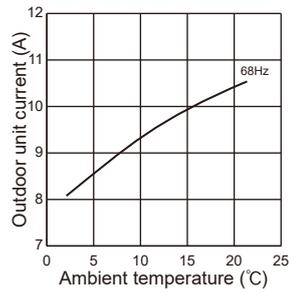
## 22-class unit



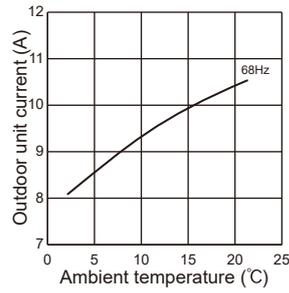
## 25-class unit



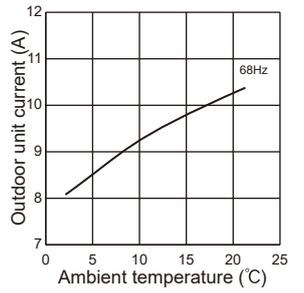
## 35-class unit



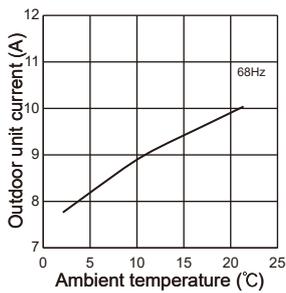
## 42-class unit



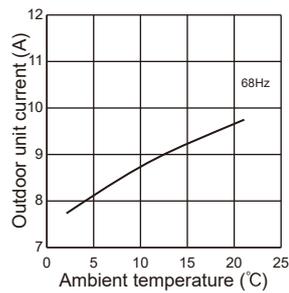
## 50-class unit



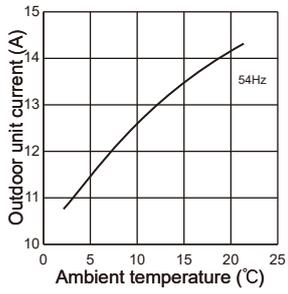
## 60-class unit



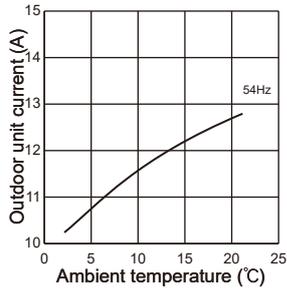
## 71-class unit



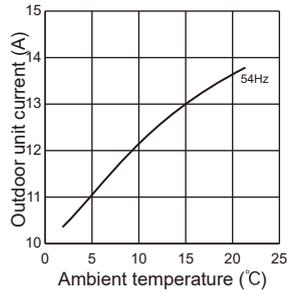
**MXZ-6F122VF**  
**15-class unit**



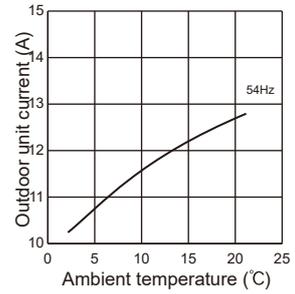
**18-class unit**



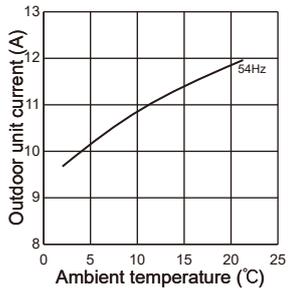
**20-class unit**



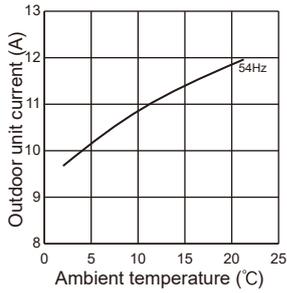
**22-class unit**



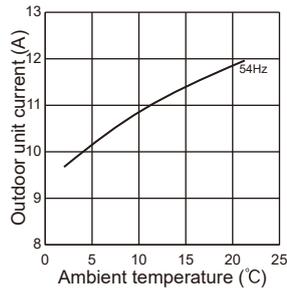
**25-class unit**



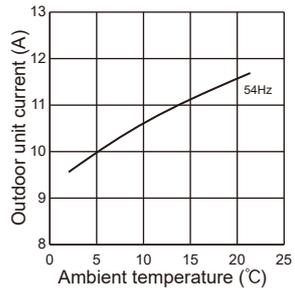
**35-class unit**



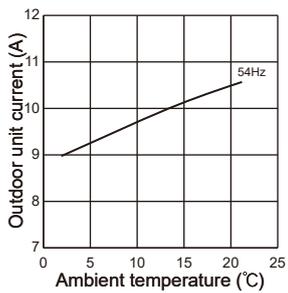
**42-class unit**



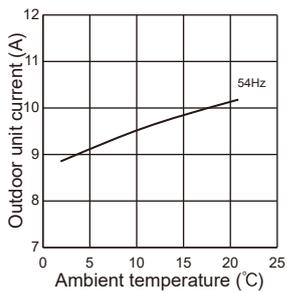
**50-class unit**



**60-class unit**

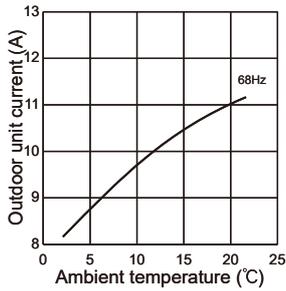


**71-class unit**

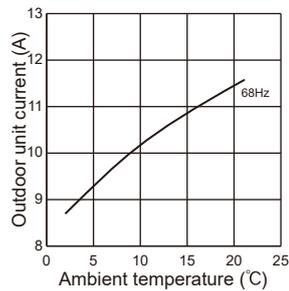


## MXZ-2F53VFHZ

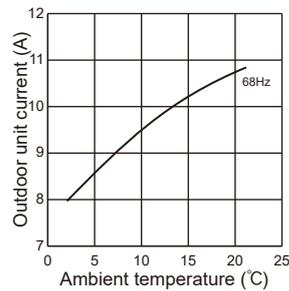
### 15-class unit



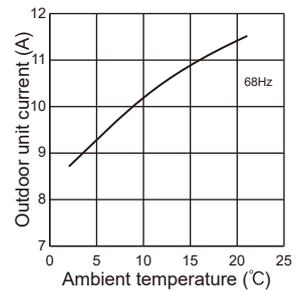
### 18-class unit



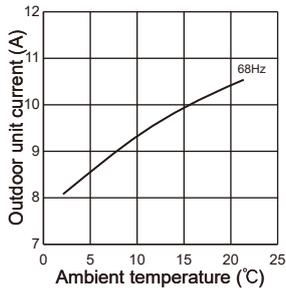
### 20-class unit



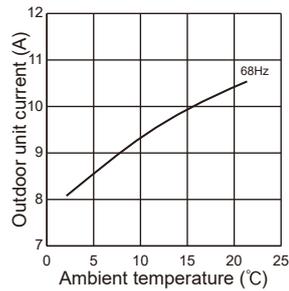
### 22-class unit



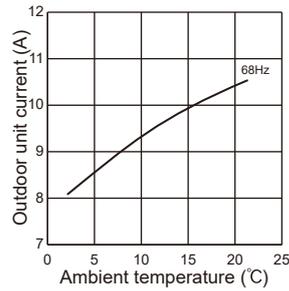
### 25-class unit



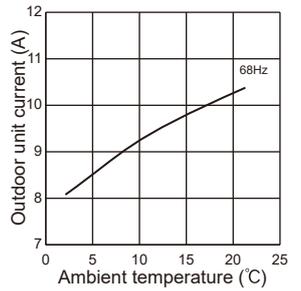
### 35-class unit



### 42-class unit

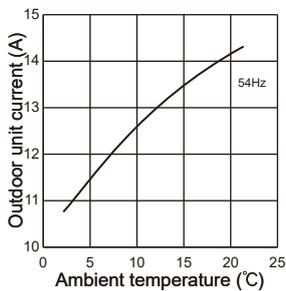


### 50-class unit

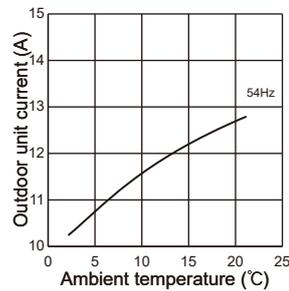


## MXZ-4F83VFHZ

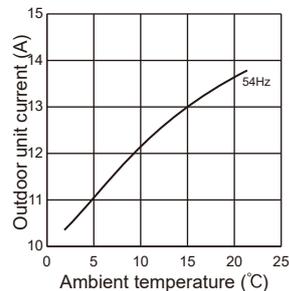
### 15-class unit



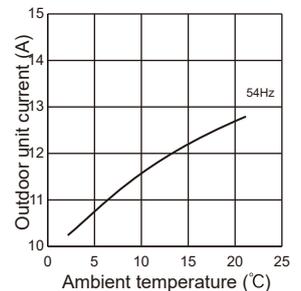
### 18-class unit



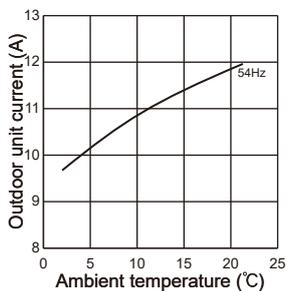
### 20-class unit



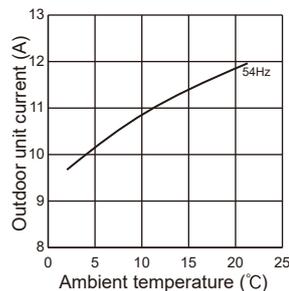
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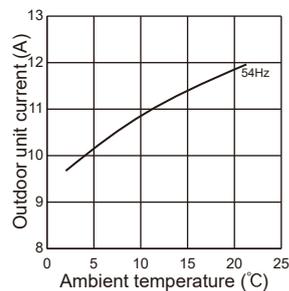
### 25-class unit



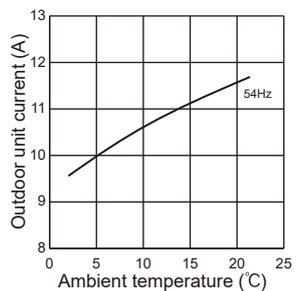
### 35-class unit



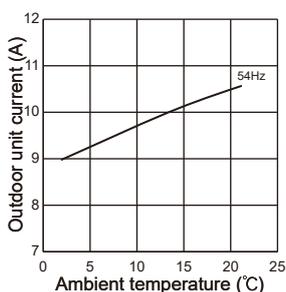
### 42-class unit



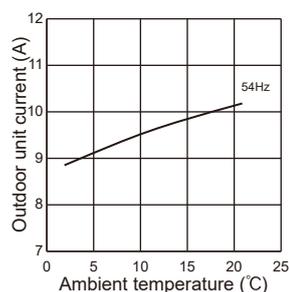
### 50-class unit



### 60-class unit



### 71-class unit



MXZ-2F33VF	MXZ-2F42VF	MXZ-2F53VF	MXZ-2F53VFH
MXZ-2F33VF2	MXZ-2F42VF2	MXZ-2F53VF2	MXZ-2F53VFH2
MXZ-2F33VF3	MXZ-2F42VF3	MXZ-2F53VF3	MXZ-2F53VFH3
MXZ-3F54VF	MXZ-3F68VF	MXZ-4F72VF	
MXZ-3F54VF2	MXZ-3F68VF2	MXZ-4F72VF2	MXZ-4F80VF2
MXZ-3F54VF3	MXZ-3F68VF3	MXZ-4F72VF3	MXZ-4F80VF3

## Relation between main sensor and actuator

Sensor	Purpose	Actuator				
		Compressor	LEV	Outdoor fan motor	4-way valve	Defrost heater *1
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	Control/Protection	○	○	○		
	Heating: Defrosting (Heater)					○
Outdoor heat exchanger temperature thermistor	Cooling: Control/Protection	○	○	○		
Capacity code	Control	○	○			

\*1 MXZ-2F53VFH, MXZ-2F53VFH2, MXZ-2F53VFH3

MXZ-4F83VF MXZ-5F102VF MXZ-6F122VF  
MXZ-2F53VFHZ MXZ-4F83VFHZ

## Relation between main sensor and actuator

Sensor	Purpose	Actuator					
		Compressor	LEV	Outdoor fan motor	4-way valve	2-way solenoid valve *1	Defrost heater *2
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	Control/Protection	○	○	○		○	
	Heating: Defrosting (Heater)						○
Outdoor heat exchanger temperature thermistor	Cooling: Control/Protection	○	○	○		○	
Capacity code	Control	○	○				

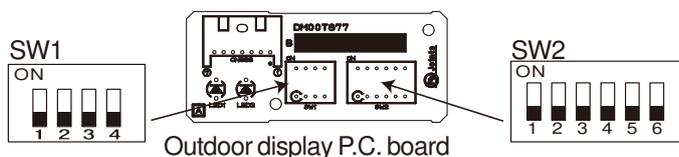
\*1 MXZ-6F122VF, MXZ-4F83VFHZ

\*2 MXZ-2F53VFHZ, 4F83VFHZ

MXZ-2F33VF	MXZ-2F42VF	MXZ-2F53VF	MXZ-2F53VFH
MXZ-2F33VF2	MXZ-2F42VF2	MXZ-2F53VF2	MXZ-2F53VFH2
MXZ-2F33VF3	MXZ-2F42VF3	MXZ-2F53VF3	MXZ-2F53VFH3
MXZ-3F54VF	MXZ-3F68VF	MXZ-4F72VF	
MXZ-3F54VF2	MXZ-3F68VF2	MXZ-4F72VF2	MXZ-4F80VF2
MXZ-3F54VF3	MXZ-3F68VF3	MXZ-4F72VF3	MXZ-4F80VF3
MXZ-4F83VF	MXZ-5F102VF	MXZ-6F122VF	
MXZ-2F53VFHZ	MXZ-4F83VFHZ		

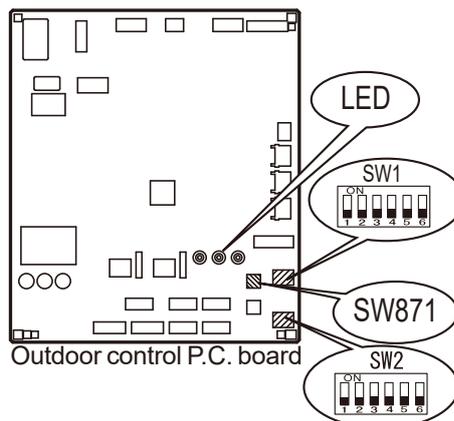
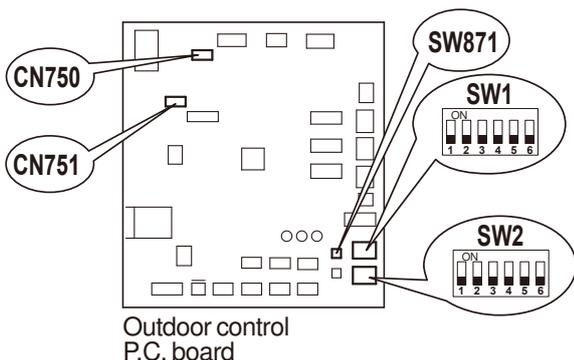
### 11-1. THE POSITION OF SWITCH

<MXZ-2F33VF/2F42VF/2F53VF/2F53VFH, MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2, MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3>



<MXZ-3F54VF/3F68VF/4F72VF, MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2, MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3>

<MXZ-4F83/5F102/6F122VF/ MXZ-2F53VFHZ/4F83VFHZ>



### 11-2. LOCKING THE OPERATION MODE OF THE AIR CONDITIONER (COOL, DRY, HEAT)

With this function, once the operation mode is locked to either COOL/DRY mode or HEAT mode, the air conditioner operates in that mode only.

Changing the setting is required to activate this function. Explain about this function to your customers and ask them whether they want to use it.

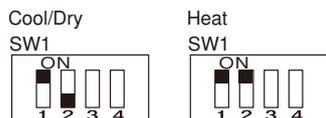
[How to lock the operation mode]

- (1) Turn OFF the power supply and make sure that the LED goes off.
- (2) Set SW1 as shown in the figure below.
- (3) Turn ON the power supply.

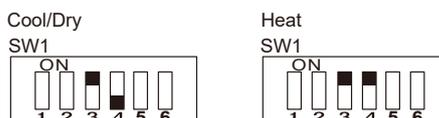
<MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3>

<MXZ-3F54VF/3F68VF/4F72VF  
MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2  
MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3  
MXZ-4F83/5F102/6F122VF/2F53VFHZ/4F83VFHZ>

SW1 on the outdoor display P.C. board



SW1 on the outdoor control P.C. board



### 11-3. HOW TO SET LOW STANDBY POWER MODE

**MXZ-3F54VF MXZ-3F68VF MXZ-4F72VF  
MXZ-3F54VF2 MXZ-3F68VF2 MXZ-4F72VF2 MXZ-4F80VF2**

•The factory setting of low standby power mode for above units is “Activated”.

In case that compressor is not in operation, and both LED1 (Red) and LED2 (Yellow) are not lit, check the setting of low standby power mode on the outdoor control P.C. board. And check the settings for dip switch (SW1) and jumper connector (SC751).

•Before turning on the breaker, settings for dip switch (SW1) and jumper connector (SC751) are necessary on the outdoor control P.C. board.

•When connecting one or more indoor units listed in Table 1, change the setting to deactivated low standby power mode.

NOTE:

•Units come with low standby power mode activated as factory setting.

•When connecting one or more indoor units listed in Table 1, the outdoor unit does not work at activated low standby power mode.

•In the event that SC751 is missing, outdoor unit will not work.

Table 1: List of the target models

Type	Model name	Capacity
Wall-mounted	MSZ-AP**VF	15 / 20
1way-cassette	MLZ-KP**VF	25 / 35 / 50
4way-cassette	SLZ-M**FA	15 / 25 / 35 / 50
Ceiling-Concealed	PEAD-M**JA(L)	50
	SEZ-M**DA(L)	25 / 35 / 50 / 60
Ceiling-Suspended	PCA-M**KA	50 / 60

**To activate low standby power mode:**

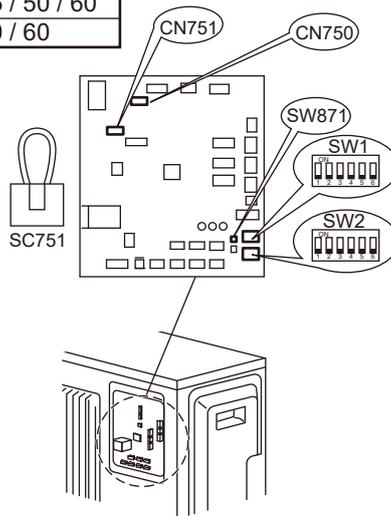
Connect SC751 to CN750.

Set “2” on SW1 to ON.

**To deactivate low standby power mode:**

Connect SC751 to CN751.

Set “2” on SW1 to OFF.



SC751	SW1	MODE
CN750		Activated
CN751		Deactivated

**MXZ-3F54VF3 MXZ-3F68VF3 MXZ-4F72VF3 MXZ-4F80VF3  
MXZ-4F83VF MXZ-5F102VF MXZ-6F122VF**

•The factory setting of low standby power mode for above units is “Deactivated”.

In case that compressor is not in operation, and both LED1 (Red) and LED2 (Yellow) are not lit, check the setting of low standby power mode on the outdoor control P.C. board. And check the settings for dip switch (SW1) and jumper connector (SC751).

•Before turning on the breaker, settings for dip switch (SW1) and jumper connector (SC751) are necessary on the outdoor control P.C. board.

•It is recommended to activate the low standby power mode when none of the indoor units listed in Table 1 is connected.

- NOTE:
- Units come with low standby power mode deactivated as factory setting.
  - When connecting one or more indoor units listed in Table 1, the outdoor unit does not work at activated low standby power mode.
  - In the event that SC751 is missing, outdoor unit will not work.

Table 1: List of the target models

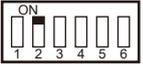
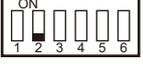
Type	Model name
Wall-mounted	MSZ-AP**VF
1way-cassette	MLZ-KP**VF
4way-cassette	SLZ-M**FA
Ceiling-Concealed	PEAD-M**JA(L)
	SEZ-M**DA(L)
Ceiling-Suspended	PCA-M**KA
Floor-Standing	SFZ-M**VA

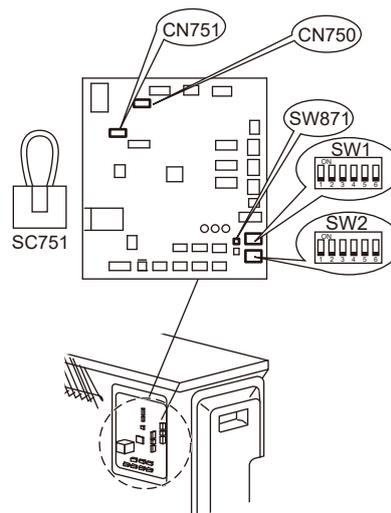
**To activate low standby power mode:**

Connect SC751 to CN750.  
Set “2” on SW1 to ON.

**To deactivate low standby power mode:**

Connect SC751 to CN751.  
Set “2” on SW1 to OFF.

SC751	SW1	MODE
CN750		Activated
CN751		Deactivated



#### 11-4. LOWERING THE OPERATING NOISE OF THE OUTDOOR UNIT

With this function, the operating noise of the outdoor unit can be lowered by reducing the operation load, for example, during nighttime in COOL mode.

However, note that the cooling and heating capacity may lower if this function is activated.

Changing the setting is required to activate this function. Explain about this function to your customers and ask them whether they want to use it.

**<MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3>**

[How to lower the operating noise]

- (1) Turn OFF the power supply and make sure that the LED goes off.
- (2) Set "3" on SW1 to ON to enable this function.
- (3) Turn ON the power supply.

##### SW1 on the outdoor display P.C. board



**<MXZ-3F54VF/3F68VF/4F72VF  
MXZ-3F54VF2/ 3F68VF2/4F72VF2/4F80VF2  
MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3  
MXZ-4F83/5F102/6F122VF/MXZ-2F53/4F83VFHZ>**

[How to lower the operating noise]

- (1) Turn OFF the power supply and make sure that the LED goes off.
- (2) Set "5" on SW1 to ON to enable this function.
- (3) Turn ON the power supply.

##### SW1 on the outdoor control P.C. board



## 11-5. AUTOMATIC LINE CORRECTING

**<MXZ-2F33VF/2F42VF/2F53VF/2F53VFH, MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2, MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3>**

This outdoor unit has an automatic line correcting function which automatically detects and corrects improper wiring or piping.

**<MXZ-2F33VF/2F42VF/2F53VF/2F53VFH, MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2, MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3>**

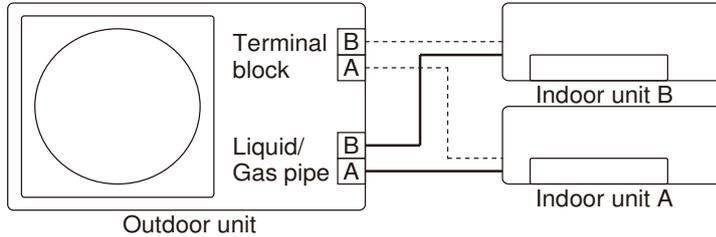
Improper wiring or piping can be automatically detected when one indoor unit is operated in COOL mode for 30 minutes. When improper wiring or piping is detected, wiring lines are corrected (A to B/ B to A) with the software.

**NOTE:** This function may not work due to the condition or environment of the unit, such as the following:

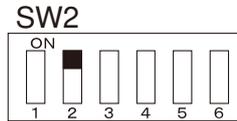
- gas leak, closed stop valve
- unit failure such as defective LEV
- indoor/outdoor temperature

**NOTE:** This function does not work when "2" on SW2 on the outdoor display P.C. board is turned OFF.

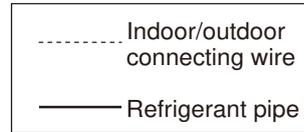
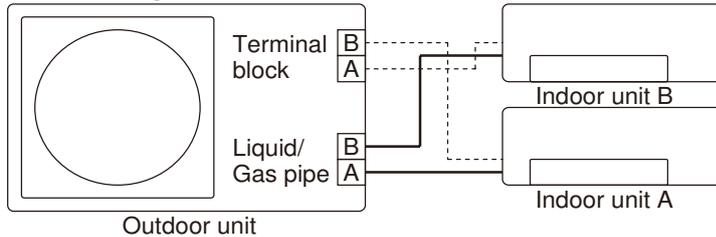
<Correct>



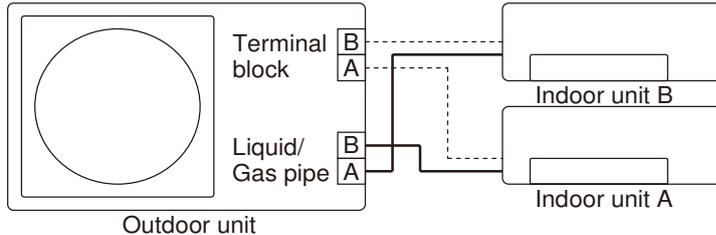
**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3  
SW2 on the outdoor display P.C. board**



<Incorrect wiring>



<Incorrect piping>

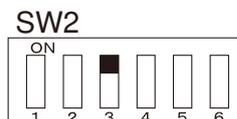


The record of automatic line correcting can be checked in the following way:

- (1) Turn OFF the power supply and make sure that the LED goes off.
- (2) Turn ON "3" on SW2 on the outdoor display P.C. board.
- (3) Turn ON the power supply.
- (4) Check the correction state with the LED lamps on the outdoor display P.C. board.
- (5) Turn OFF the power supply and make sure that the LED goes off.
- (6) Turn OFF "3" on SW2 on the outdoor display P.C. board.
- (7) Turn ON the power supply.

Number of blinks		Wiring line
LED1 (Red)	LED2 (Yellow)	
Once	Once	Not corrected
3 times	3 times	Corrected

**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3  
SW2 on the outdoor display P.C. board**



**<MXZ-3F54VF/3F68VF/4F72VF, MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2, MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3, MXZ-4F83/5F102/6F122VF, MXZ-2F53/4F83VFHZ>**

Outdoor unit has an auto line correcting function which automatically detects and corrects improper wiring or piping.

Improper wiring or piping can be automatically detected by pressing the piping/wiring correction switch (SW871).  
When improper wiring or piping is detected, wiring lines are corrected.  
This will be completed in about 10 to 15 minutes.

**[How to activate this function]**

1. Check that outside temperature is above 0°C.  
(This function does not work when the outside temperature is 0°C or below.)
2. Check that the stop valves of the liquid pipe and gas pipe are open.
3. Check that the wiring between indoor and outdoor unit is correct.  
(If the wiring is not correct, this function does not work.)
4. Turn ON the power supply and wait at least 1 minute.
5. Press the piping/wiring correction switch (SW871) on the outdoor control P.C. board.  
Do not touch energized parts.

LED indication during detection:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Lit	Lit	Once

LED indication after detection:

LED1 (Red)	LED2 (Yellow)	LED3 (Green)	Result
Lit	Not lit	Lit	Completed (Problem corrected/ normal)
Once	Once	Once	Not completed (Detection failed)
Other indications			Refer to "SAFETY PRECAUTIONS WHEN LED BLINKS" located behind the top panel.

\* Make sure that the valves are open and the pipes are not collapsed or clogged.

6. Press the switch to cancel.

LED indication after cancel :

LED1 (Red)	LED2 (Yellow)	LED3 (Green)
Lit	Lit	Not lit

**NOTE:** Indoor unit cannot be operated while this function is activated.  
When this function is activated while indoor unit is operating, the operation will be stopped.  
Operate indoor unit after the auto line correcting is finished.  
Pressing the switch during detection cancels this function.

**The record of auto line correcting can be confirmed in the following way:**

Press the switch for more than 5 seconds.

LED will show the record of auto correcting for about 30 seconds as shown in the table below:

Number of blinks			Wiring line
LED1 (Red)	LED2 (Yellow)	LED3 (Green)	
Once	Once	Lit	Not corrected
3 times	3 times	Lit	Corrected

**NOTE:** Activate this function to confirm the correct wiring after replacing the outdoor control P.C. board.  
(Previous records are deleted when the outdoor control P.C. board is replaced.)  
The record cannot be shown if auto line correcting is not canceled (Refer to "How to activate this function").

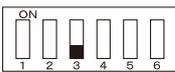
### 11-6. CHANGING THE SET REFRIGERANT EVAPORATING TEMPERATURE

**NOTE:** If you lower the refrigerant evaporating temperature with the windows open, it may cause dew drop.

[How to change the refrigerant evaporating temperature]

- (1) Make sure there is no possibility of causing dew drop before making the setting.
- (2) Make the setting referring to the table below.

**SW2 on the outdoor control P.C. board**

SW2	<b>MXZ-3F54VF</b> <b>MXZ-3F68VF</b> <b>MXZ-4F72VF</b>	<b>MXZ-3F54VF2/VF3</b> <b>MXZ-3F68VF2/VF3</b> <b>MXZ-4F72VF2/VF3</b> <b>MXZ-4F80VF2/VF3</b>	<b>MXZ-4F83VF</b> <b>MXZ-5F102vf</b> <b>MXZ-6F122VF</b> <b>MXZ-2F53VFHZ</b> <b>MXZ-4F83VFHZ</b>
	7 °C or 9 °C	6 °C	
	Normal control		

### 11-7. CHANGING THE AMPERE LIMIT

**<MXZ-2F53VFHZ/4F83VFHZ/MXZ-6F122VF>**

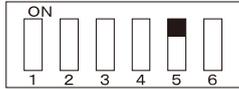
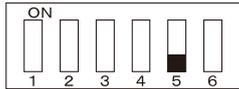
With this function, the amount of current that flows in the outdoor unit can be changed.

**NOTE:** Use this function only when the amount of current exceeds the allowed value.

[How to change the ampere limit]

- (1) Be sure to turn off the power supply for the air conditioner before making the setting.
- (2) Make the setting referring to the table below.
- (3) Turn ON the power supply.

**SW2 on the outdoor control P.C. board**

SW2	<b>MXZ-2F53VFHZ</b>	<b>MXZ-4F83VFHZ</b>	<b>MXZ-6F122VF</b>
	13.6 A (Factory setting)	21 A	20 A
	18.4 A	Full (Factory setting)	Full (Factory setting)

MXZ-2F33VF	MXZ-2F42VF	MXZ-2F53VF	MXZ-2F53VFH
MXZ-2F33VF2	MXZ-2F42VF2	MXZ-2F53VF2	MXZ-2F53VFH2
MXZ-2F33VF3	MXZ-2F42VF3	MXZ-2F53VF3	MXZ-2F53VFH3
MXZ-3F54VF	MXZ-3F68VF	MXZ-4F72VF	
MXZ-3F54VF2	MXZ-3F68VF2	MXZ-4F72VF2	MXZ-4F80VF2
MXZ-3F54VF3	MXZ-3F68VF3	MXZ-4F72VF3	MXZ-4F80VF3
MXZ-4F83VF	MXZ-5F102VF	MXZ-6F122VF	
MXZ-2F53VFHZ	MXZ-4F83VFHZ		

### 12-1. 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 unit first with the remote controller, and after confirming the horizontal vane is closed, turn OFF the breaker and/or disconnect the power plug.
- 2) Be sure to turn OFF the power supply before removing the front panel, the cabinet, the top panel, and the P.C. board.
- 3) When removing the electrical parts, be careful of the residual voltage of smoothing capacitor.
- 4) When removing the 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 connector housing. DO NOT pull the lead wires.

<Incorrect>



Lead wiring

<Correct>



Connector housing

#### 3. Troubleshooting procedure

- 1) Check if the OPERATION INDICATOR lamp on the indoor unit is blinking on and off to indicate an abnormality. To make sure, check how many times the OPERATION INDICATOR lamp is blinking on and off before starting service work.
- 2) Before servicing, check that the connector and terminal are connected properly.
- 3) When the P.C. board seems to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
- 4) Refer to 12-2, 12-3 and 12-4.

### 12-2. FAILURE MODE RECALL FUNCTION

This air conditioner can memorize the abnormal condition which has occurred once.

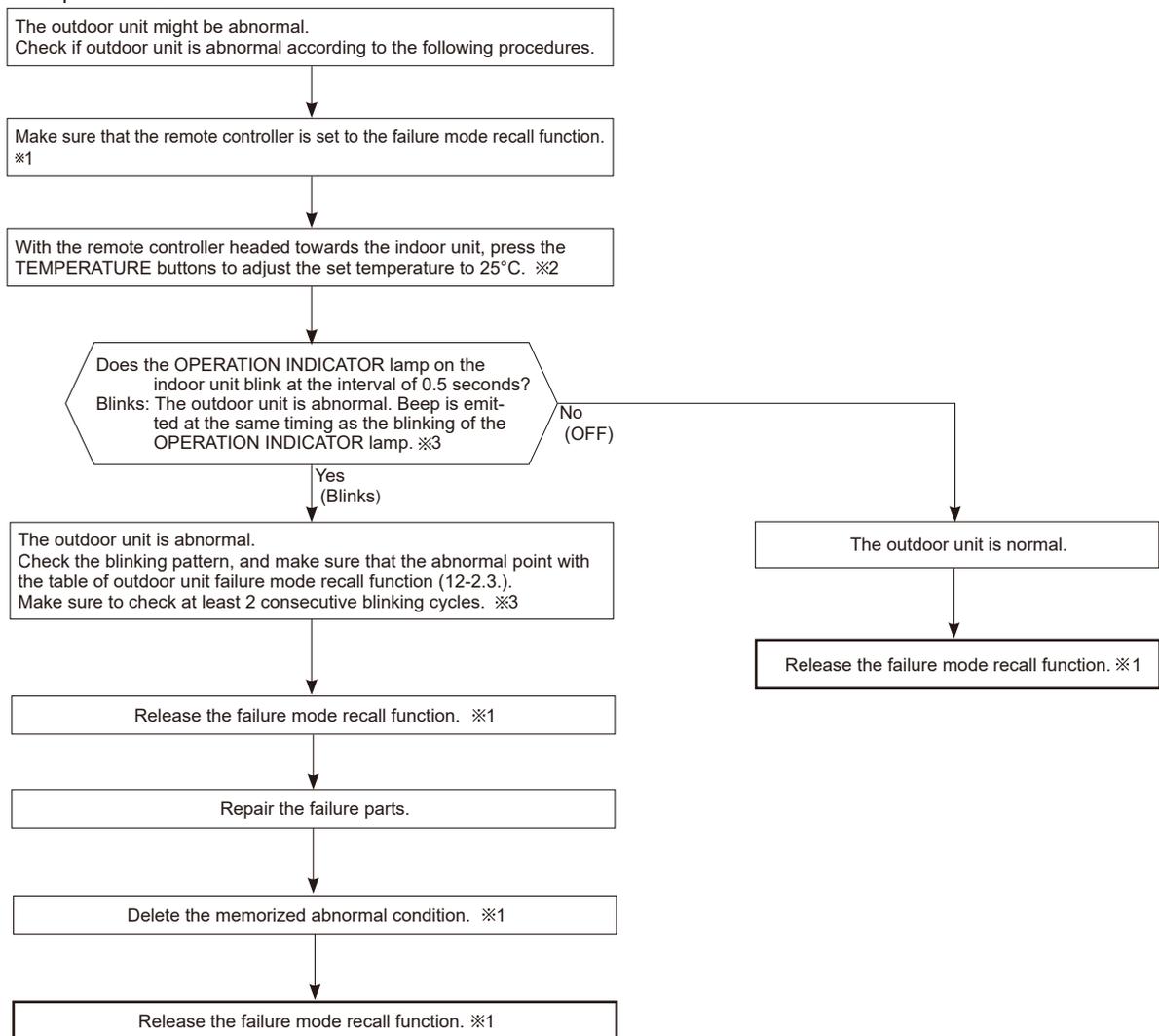
Even though LED indication listed on the troubleshooting check table (12-4.) disappears, the memorized failure details can be recalled.

#### 1. Flow chart of failure mode recall function for the indoor/outdoor unit

Refer to the service manual of indoor unit.

## 2. Flow chart of the detailed outdoor unit failure mode recall function

### Operational procedure

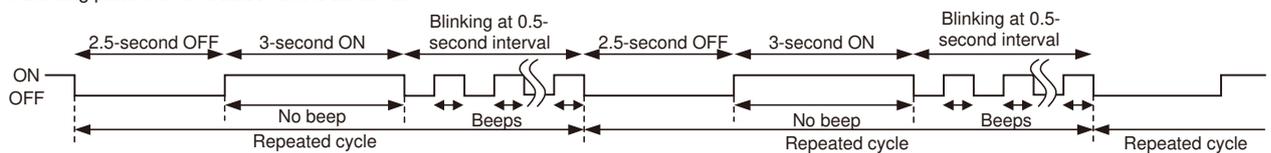


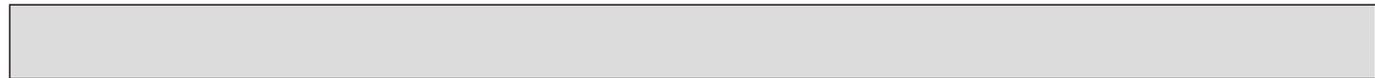
**NOTE:** 1. Make sure to release the failure mode recall function after it is set up, otherwise the unit cannot operate properly.  
2. If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

※1. Refer to the service manual of indoor unit.

※2. Regardless of normal or abnormal condition, 2 short beeps are emitted as the signal is received.

※3. Blinking pattern when outdoor unit is abnormal:





**3. Table of outdoor unit failure mode recall function**  
**MXZ-2F33/42/53VF/VF2/VF3, MXZ-2F53VFH/VFH2/VFH3**

**NOTE:** Blinking patterns of this mode differ from the ones of Troubleshooting check table (12-4).

Upper or left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)		Condition	Remedy	Indoor/outdoor unit failure mode recall function
		LED 1	LED 2			
OFF	None (Normal)	Not lit	Not lit	—	—	—
2-time blink	Outdoor power system	Lit	Lit	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started. Compressor protection cut-out operates 24 consecutive times within 10 seconds after the compressor gets started.	<ul style="list-style-type: none"> <li>• Check the compressor connecting wire.</li> <li>• Refer to 12-6. ⑥ "How to check inverter/compressor".</li> <li>• Check the stop valve.</li> </ul>	○
3-time blink	Discharge temperature thermistor	Lit	Once	Thermistor shorts or opens during compressor running.	<ul style="list-style-type: none"> <li>• Refer to 12-6. ⑥ "Check of outdoor thermistors".</li> </ul>	○
	Defrost thermistor	Lit	Once			○
	Ambient temperature thermistor	Lit	Twice			○
	Fin temperature thermistor	Lit	3 times			○
	P.C. board temperature thermistor	Lit	4 times			○
	Outdoor heat exchanger temperature thermistor	Lit	9 times			○
4-time blink	Overcurrent	Once	Not lit	The overcurrent flows into intelligent power module.	<ul style="list-style-type: none"> <li>• Check the compressor connecting wire.</li> <li>• Refer to 12-6. ⑥ "How to check inverter/compressor".</li> <li>• Check the stop valve.</li> </ul>	—
	Compressor	Twice	Not lit	The overcurrent flows into intelligent power module within 10 seconds after the compressor gets started. (The compressor gets restarted in 15 seconds.)	<ul style="list-style-type: none"> <li>• Check the compressor connecting wire.</li> <li>• Refer to 12-6. ⑥ "How to check inverter/compressor".</li> </ul>	—
		9 times	Not lit	Waveform of compressor current is distorted.		—
5-time blink	Discharge temperature	Lit	Lit	Discharge temperature exceeds 116°C during operation.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit and the refrigerant amount.</li> <li>• Refer to 12-6. ⑥ "Check of LEV".</li> </ul>	—
6-time blink	High pressure	Lit	Lit	The outdoor heat exchanger temperature exceeds 70°C during cooling or the indoor gas pipe temperature exceeds 70°C during heating.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit and the refrigerant amount.</li> <li>• Check the stop valve.</li> </ul>	—
7-time blink	Fin temperature	3 times	Not lit	The fin temperature exceeds 90°C during operation.	<ul style="list-style-type: none"> <li>• Check the around outdoor unit.</li> <li>• Check the outdoor unit air passage.</li> </ul>	—
	P.C. board temperature	4 times	Not lit	The P.C. board temperature exceeds 80°C during operation.	<ul style="list-style-type: none"> <li>• Refer to 12-6. ⑥ "Check of outdoor fan motor".</li> </ul>	—
8-time blink	Outdoor fan motor	Lit	Lit	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	<ul style="list-style-type: none"> <li>• Refer to 12-6. ⑥ "Check of outdoor fan motor".</li> </ul>	—
9-time blink	Nonvolatile memory data	Lit	5 times	Nonvolatile memory data cannot be read properly.	<ul style="list-style-type: none"> <li>• Replace the inverter P.C. board.</li> </ul>	○
	Power module	7 times	Not lit	The output of the power module that drove the compressor was shorted or the winding of the compressor was shorted.	<ul style="list-style-type: none"> <li>• Refer to 12-6. ⑥ "How to check inverter/compressor".</li> </ul>	○
10-time blink	Discharge temperature	Lit	Lit	The discharge temperature is kept under 50°C (COOL mode)/40°C (HEAT mode) for more than 40 minutes.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit and the refrigerant amount.</li> <li>• Refer to 12-6. ⑥ "Check of LEV".</li> </ul>	—
11-time blink	Current sensor	8 times	Not lit	The sensor circuit of current of compressor shorts or opens during compressor operate.	<ul style="list-style-type: none"> <li>• Replace the inverter P.C. board.</li> </ul>	○
	Bus-bar voltage	6 times	Not lit	The bus-bar voltage exceeds 430 V or falls to 50 V or below during compressor operating.	<ul style="list-style-type: none"> <li>• Check the power supply.</li> <li>• Replace the inverter P.C. board.</li> </ul>	○
14-time blink	Stop valve	Lit	12 times	The current of compressor is power module is out of order.	<ul style="list-style-type: none"> <li>• Check the stop valve.</li> <li>• Check the refrigerant circuit and the refrigerant amount.</li> </ul>	○
	Refrigerant leakage (Sensor detection)	Lit	Lit	1. Refrigerant leaks from the piping or the heat exchanger in the indoor unit. 2. The following items are used around the indoor unit. <ul style="list-style-type: none"> <li>• Spray (LP gas including Freon, and whose main ingredient is propane and butane)</li> <li>• Aerosol insecticide (including ethanol)</li> <li>• Air spray painting (including dichloromethane)</li> <li>• Charcoal (charcoal fire)</li> <li>• Chemicals (such as ethanol)</li> </ul>	<ul style="list-style-type: none"> <li>• Turn off the power after the indoor unit finishes its FAN operation. (The FAN operation continues for 3 hours.)</li> <li>• Check the indoor unit to detect the part where refrigerant leaks.</li> <li>• Repair the part where refrigerant leaks.</li> <li>• Turn on the power again.</li> <li>• Replace the refrigerant sensor if the problem is not fixed.</li> </ul>	○



Upper or left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)		Condition	Remedy	Indoor/outdoor unit failure mode recall function
		LED 1	LED 2			
14-time blink	Refrigerant leakage (Sensor detection)	Lit	Lit	The refrigerant sensor mounted on the indoor unit does not work. The refrigerant sensor is not connected properly or the wire is broken.	<ul style="list-style-type: none"> <li>• Connect the connector of the refrigerant sensor properly.</li> <li>• Replace the refrigerant sensor.</li> </ul>	○
	Incompatible unit combination	Lit	11 times	The indoor unit which is not compatible with the outdoor unit is connected.	<ul style="list-style-type: none"> <li>• Replace the indoor unit with the one which is compatible with the outdoor unit.</li> </ul>	○
17-time blink	Outdoor refrigerant system abnormality	Lit	17 times	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.	<ul style="list-style-type: none"> <li>• Check for a gas leak in a connecting piping etc.</li> <li>• Check the stop valve.</li> <li>• Refer to 12-6. ⑧ "Check of outdoor refrigerant circuit".</li> </ul>	○

**NOTE:** Blinking patterns of this mode differ from the ones of Troubleshooting check table (12-4.).

**MXZ-3F, 4F, 5F, 6F, MXZ-2F53VFHZ, MXZ-4F83VFHZ**

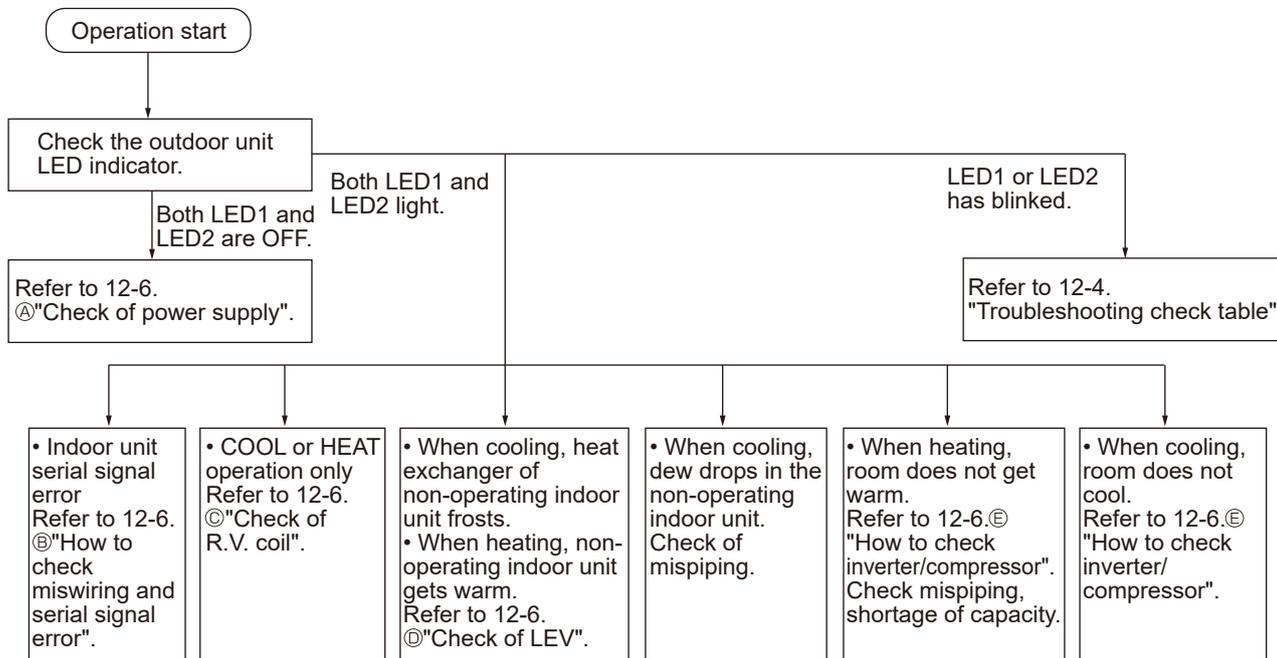
The left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)		Condition	Remedy	Indoor/outdoor unit failure mode recall function
		LED1	LED2			
OFF	None (Normal)	Lit	Lit			
2-time blink	Outdoor power system	Lit	Lit	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started, or converter protection cut-out or bus-bar voltage protection cut-out operates 3 consecutive times within 3 minutes after startup.	<ul style="list-style-type: none"> <li>Check the connection of the compressor connecting wire.</li> <li>Refer to 12-6. ㊦ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>	○
3-time blink	Discharge temperature thermistor	Lit	Once	A thermistor shorts or opens during compressor running.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㊦ "Check of outdoor thermistors".</li> </ul>	○
	Defrost thermistor	Lit	Once			
	Ambient temperature thermistor	Lit	Twice			
	Fin temperature thermistor	Lit	3 times			
	P.C. board temperature thermistor	Lit	4 times			
Outdoor heat exchanger temperature thermistor	Lit	9 times				
4-time blink	Overcurrent	Once	Not lit	21 A current flows into power module.	<ul style="list-style-type: none"> <li>Reconnect compressor connector.</li> <li>Refer to 12-6. ㊦ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>	—
5-time blink	Discharge temperature	Lit	Lit	The discharge temperature exceeds 115°C (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3)/ 106°C (MXZ-4F83/5F102VF, MXZ-2F53VFHZ)/ 116°C (MXZ-4F83VFHZ) during operation. Compressor can restart if discharge temperature thermistor reads 80°C (MXZ-3F54/3F68/4F72VF/VF2/VF3)/95°C (MXZ-4F83/5F102VF, MXZ-2F53VFHZ)/100°C (MXZ-6F122VF, MXZ-4F83VFHZ) or less 3 minutes later.	<ul style="list-style-type: none"> <li>Check refrigerant circuit and refrigerant amount.</li> <li>Refer to 12-6. ㊦ "Check of LEV".</li> </ul>	—
6-time blink	High pressure	Lit	Lit	The outdoor heat exchanger temperature exceeds 70°C during cooling or the indoor gas pipe temperature exceeds 70°C during heating.	<ul style="list-style-type: none"> <li>Check refrigerant circuit and refrigerant amount.</li> <li>Check the stop valve.</li> </ul>	—
7-time blink	Fin temperature	3 times	Not lit	The fin temperature exceeds 88°C (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F83/5F102VF, MXZ-2F53VFHZ)/89°C (MXZ-6F122VF, MXZ-4F83VFHZ) during operation.	<ul style="list-style-type: none"> <li>Check around outdoor unit.</li> <li>Check outdoor unit air passage.</li> <li>Refer to 12-6. ㊦ "Check of outdoor fan motor".</li> </ul>	—
	P.C. board temperature	4 times	Not lit	The P.C. board temperature exceeds 67°C (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3/4F83/5F102VF, MXZ-2F53VFHZ)/87°C (MXZ-6F122VF, MXZ-4F83VFHZ) during operation.		
8-time blink	Outdoor fan motor	Lit	Lit	A failure occurs 3 consecutive times within 30 seconds after the fan gets started.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㊦ "Check of outdoor fan motor".</li> </ul>	—
9-time blink	Outdoor control system	Lit	5 times	Nonvolatile memory data cannot be read properly.	<ul style="list-style-type: none"> <li>Replace the outdoor control P.C. board.</li> </ul>	○
10-time blink	Low discharge temperature protection	Lit	Lit	The frequency of the compressor is kept 80 Hz or more and the discharge temperature is kept under 39°C for more than 20 minutes.	<ul style="list-style-type: none"> <li>Check refrigerant circuit and refrigerant amount.</li> <li>Refer to 12-6. ㊦ "Check of LEV".</li> </ul>	—
11-time blink	Communication error between P.C. boards	Lit	6 times	Communication error occurs between the outdoor control P.C. board and outdoor power P.C. board for more than 10 seconds.	<ul style="list-style-type: none"> <li>Check the connecting wire between outdoor control P.C. board and outdoor power P.C. board.</li> </ul>	—
				The communication between boards protection cut-out operates 2 consecutive times.		○
	Current sensor	Lit	7 times	A short or open circuit is detected in the current sensor during compressor operating.	—	—
				Current sensor protection cut-out operates 2 consecutive times.		○
	Zero cross detecting circuit	5 times	Not lit	Zero cross signal cannot be detected while the compressor is operating.	<ul style="list-style-type: none"> <li>Check the connecting wire among outdoor control P.C. board and outdoor power P.C. board.</li> </ul>	—
				The protection cut-out of the zero cross detecting circuit operates 10 consecutive times.		○
Converter	5 times	Not lit	A failure is detected in the operation of the converter during operation.	<ul style="list-style-type: none"> <li>Check the voltage of power supply.</li> <li>Replace the outdoor power P.C. board.</li> </ul>	—	
Bus-bar voltage	5 times	Not lit	The bus-bar voltage exceeds 400 V or falls to low level during compressor operating.	<ul style="list-style-type: none"> <li>Check the voltage of power supply.</li> <li>Replace the outdoor control P.C. board.</li> </ul>	—	



The left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)		Condition	Remedy	Indoor/outdoor unit failure mode recall function
		LED1	LED2			
14-time blink	Refrigerant leakage (Sensor detection)	Lit	Lit	1.Refrigerant leaks from the piping or the heat exchanger in the indoor unit. 2.The following items are used around the indoor unit. <ul style="list-style-type: none"> <li>• Spray (LP gas including Freon, and whose main ingredient is propane and butane)</li> <li>• Aerosol insecticide (including ethanol)</li> <li>• Air spray painting (including dichloromethane)</li> <li>• Charcoal (charcoal fire)</li> <li>• Chemicals (such as ethanol)</li> </ul>	<ul style="list-style-type: none"> <li>• Turn off the power after the indoor unit finishes its FAN operation. (The FAN operation continues for 3 hours.)</li> <li>• Check the indoor unit to detect the part where refrigerant leaks.</li> <li>• Repair the part where refrigerant leaks.</li> <li>• Turn on the power again.</li> <li>• Replace the refrigerant sensor if the problem is not fixed.</li> </ul>	○
14-time blink	Refrigerant leakage (Sensor detection)	Lit	Lit	The refrigerant sensor mounted on the indoor unit does not work. The refrigerant sensor is not connected properly or the wire is broken.	<ul style="list-style-type: none"> <li>• Connect the connector of the refrigerant sensor properly.</li> <li>• Replace the refrigerant sensor.</li> </ul>	○
	Incompatible unit combination	Lit	11 times	The indoor unit which is not compatible with the outdoor unit is connected.	<ul style="list-style-type: none"> <li>• Replace the indoor unit with the one which is compatible with the outdoor unit.</li> </ul>	○
15-time blink	LEV and drain pump	Lit	Lit	The indoor unit detects an abnormality in the LEV and drain pump.	<ul style="list-style-type: none"> <li>• Refer to 12-6. © "Check of LEV".</li> <li>• Check the drain pump of the indoor unit.</li> </ul>	—

### 12-3. INSTRUCTION OF TROUBLESHOOTING

- Check the indoor unit referring to the indoor unit service manual, and confirm that there is any problem in the indoor unit. Then, check the outdoor unit with referring to this page.



## 12-4. TROUBLESHOOTING CHECK TABLE

### MXZ-2F33/42/53VF/VF2/VF3, MXZ-2F53VFH/VFH2/VFH3

No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
1	Outdoor unit does not operate.	Lit	Once	LEV and drain pump	The indoor unit detects an abnormality in the LEV and drain pump.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㉔ "Check of LEV".</li> <li>Check the drain pump of the indoor unit.</li> </ul>
2		Lit	Twice	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started.	<ul style="list-style-type: none"> <li>Check the connection of the compressor connecting wire.</li> <li>Refer to 12-6. ㉕ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>
3		Lit	3 times	Discharge temperature thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 10 minutes of compressor startup.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㉖ "Check of outdoor thermistors".</li> </ul>
4		Lit	4 times	Fin temperature thermistor	A short or open circuit is detected in the thermistor during operation.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㉖ "Check of outdoor thermistors".</li> </ul>
				P.C board temperature thermistor		<ul style="list-style-type: none"> <li>Replace the inverter P.C. board.</li> </ul>
5		Lit	5 times	Ambient temperature thermistor	A short or open circuit is detected in the thermistor during operation.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㉖ "Check of outdoor thermistors".</li> </ul>
				Outdoor heat exchanger temperature thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 5 minutes (in cooling) and 10 minutes (in heating) of compressor startup.	
				Defrost thermistor	A short circuit is detected in the thermistor during operation, or when an open circuit is detected in the thermistor after 5 minutes of compressor startup.	
6		Lit	7 times	Nonvolatile memory data	The nonvolatile memory data cannot be read properly.	<ul style="list-style-type: none"> <li>Replace the inverter P.C. board.</li> </ul>
7		Lit	11 times	Stop valve Closed valve	Closed valve is detected by compressor current. (MXZ-2F33VF, MXZ-2F33VF2, MXZ-2F33VF3)	<ul style="list-style-type: none"> <li>Check the stop valve.</li> </ul>
8		Lit	17 times	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.	<ul style="list-style-type: none"> <li>Check for a gas leak in a connecting piping etc.</li> <li>Check the stop valve.</li> <li>Refer to 12-6. ㉗ "Check of outdoor refrigerant circuit".</li> </ul>
9	Lit	18 times	Detection of refrigerant (Indoor unit)	<ol style="list-style-type: none"> <li>Refrigerant leaks from the piping or the heat exchanger in the indoor unit.</li> <li>The following items are used around the indoor unit. <ul style="list-style-type: none"> <li>Spray (LP gas including Freon, and whose main ingredient is propane and butane)</li> <li>Aerosol insecticide (including ethanol)</li> <li>Air spray painting (including dichloromethane)</li> <li>Charcoal (charcoal fire)</li> <li>Chemicals (such as ethanol)</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>Turn off the power after the indoor unit finishes its fan operation. (The fan operation continues for 3 hours.)</li> <li>Check the indoor unit to detect the part where refrigerant leaks.</li> <li>Repair the part where refrigerant leaks.</li> <li>Turn on the power again.</li> <li>Replace the refrigerant sensor if the problem is not fixed.</li> </ul>	
10	Lit	19 times	Abnormality of refrigerant leakage sensor (Indoor unit)	The refrigerant sensor mounted on the indoor unit does not work. The refrigerant sensor is not connected properly or the wire is broken.	<ul style="list-style-type: none"> <li>Connect the connector of the refrigerant sensor properly.</li> <li>Replace the refrigerant sensor.</li> </ul>	
11	Lit	20 times	Incompatible unit combination error	The indoor unit which is not compatible with the outdoor unit is connected.	<ul style="list-style-type: none"> <li>Replace the indoor unit with the one which is compatible with the outdoor unit.</li> </ul>	
12	'Outdoor unit stops and restarts 3 minutes later' is repeated.	Twice	Not lit	Overcurrent	14 A (MXZ-2F33VF, MXZ-2F33VF2, MXZ-2F33VF3)/18 A (MXZ-2F42VF, MXZ-2F42VF2, MXZ-2F42VF3, MXZ-2F53VF/VFH, MXZ-2F53VF2/VFH2, MXZ-2F53VF3/VFH3) current flows into intelligent power module.	<ul style="list-style-type: none"> <li>Reconnect compressor connector.</li> <li>Refer to 12-6. ㉕ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>
13		3 times	Not lit	Discharge temperature protection	Discharge temperature exceeds 116°C during operation. Compressor can restart if discharge temperature thermistor reads 100°C or less 3 minutes later.	<ul style="list-style-type: none"> <li>Check the amount of gas and the refrigerant circuit.</li> <li>Refer to 12-6. ㉔ "Check of LEV".</li> </ul>
14		4 times	Not lit	Fin temperature protection	The fin temperature exceeds 90°C during operation.	<ul style="list-style-type: none"> <li>Check the refrigerant circuit and the refrigerant amount.</li> <li>Refer to 12-6. ㉔ "Check of outdoor fan motor".</li> </ul>
				P.C. board temperature protection	The P.C. board temperature exceeds 78°C during operation.	
15		5 times	Not lit	High pressure protection	The outdoor heat exchanger temperature exceeds 70°C during cooling or indoor gas pipe temperature exceeds 70°C during heating.	<ul style="list-style-type: none"> <li>Check the amount of gas and the refrigerant circuit.</li> <li>Check the stop valve.</li> </ul>
16		9 times	Not lit	Bus-bar voltage protection	The bus-bar voltage exceeds 430 V or falls to 50 V or below during compressor operating.	<ul style="list-style-type: none"> <li>Replace the inverter P.C. board.</li> </ul>
17		13 times	Not lit	Outdoor fan motor	Failure occurs 3 consecutive times within 30 seconds after the fan gets started.	<ul style="list-style-type: none"> <li>Refer to 12-6. ㉔ "Check of outdoor fan motor".</li> </ul>
18		8 times	Not lit	Current sensor protection	A short or open circuit is detected in the current sensor during compressor operating.	<ul style="list-style-type: none"> <li>Replace the inverter P.C. board.</li> </ul>
19		10 times	Not lit	Compressor	The compressor does not synchronize with the operating power.	<ul style="list-style-type: none"> <li>Reconnect compressor connector.</li> <li>Refer to 12-6. ㉕ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>



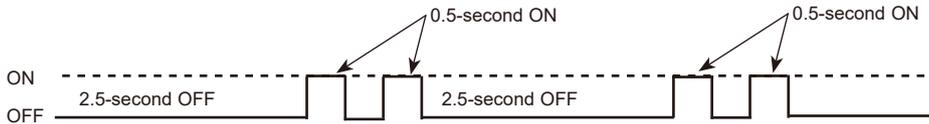
No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
20	Outdoor unit operates.	Once	Lit	Primary current protection	The input current exceeds 8 A (MXZ-2F33VF, MXZ-2F33VF2, MXZ-2F33VF3)/ 10 A (MXZ-2F42VF, MXZ-2F42VF2, MXZ-2F42VF3, MXZ-2F53VF/VFH, MXZ-2F53VF2/VFH2, MXZ-2F53VF3/VFH3).	These symptoms do not mean any abnormality of the product, but check the following points. <ul style="list-style-type: none"> <li>• Check if indoor filters are clogged.</li> <li>• Check if refrigerant is short.</li> <li>• Check if indoor/outdoor unit air circulation is short cycled.</li> </ul>
				Secondary current protection	The current of the compressor exceeds 17 A.	
21	Twice	Lit	High pressure protection	The indoor gas pipe temperature exceeds 45°C during heating.		
			Defrosting in cooling	The indoor gas pipe temperature falls 3°C or below during cooling.		
22	3 times	Lit	Discharge temperature protection	The discharge temperature exceeds 100°C during operation.	<ul style="list-style-type: none"> <li>• Check the refrigerant circuit and the refrigerant amount.</li> <li>• Refer to 12-6. Ⓞ "Check of LEV".</li> <li>• Refer to 12-6. Ⓞ "Check of outdoor thermistors".</li> </ul>	
23	4 times	Lit	Low discharge temperature protection	The frequency of the compressor is kept 68 Hz (MXZ-2F33VF, MXZ-2F33VF2, MXZ-2F33VF3)/80 Hz (MXZ-2F42VF, MXZ-2F42VF2, MXZ-2F42VF3, MXZ-2F53VF/VFH, MXZ-2F53VF2/VFH2, MXZ-2F53VF3/VFH3) or more and the discharge temperature is kept under 50°C (COOL mode)/40°C (HEAT mode) for more than 40 minutes.	<ul style="list-style-type: none"> <li>• Refer to 12-6. Ⓞ "Check of LEV".</li> <li>• Check the refrigerant circuit and the refrigerant amount.</li> </ul>	
24	5 times	Lit	Cooling high pressure protection	The outdoor heat exchanger temperature exceeds 58°C during operation.	This symptom does not mean any abnormality of the product, but check the following points. <ul style="list-style-type: none"> <li>• Check if indoor filters are clogged.</li> <li>• Check if refrigerant is short.</li> <li>• Check if indoor/outdoor unit air circulation is short cycled.</li> </ul>	
25	8 times	Lit	Converter protection	A failure is detected in the operation of the converter during operation.	<ul style="list-style-type: none"> <li>• Check the voltage of power supply.</li> <li>• Replace the inverter P.C. board.</li> </ul>	
26	Outdoor unit operates normally.	9 times	Lit	Inverter check mode	The connector of compressor is disconnected. Inverter check mode starts.	—
27		Lit	Lit	Normal	—	—

NOTE 1. The location of LED is illustrated at the right figure. Refer to 12-7.4.

2. LED is lighted during normal operation.

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

Outdoor display P.C. board (Parts side)



**MXZ-3F, 4F, 5F, 6F, MXZ-2F53VFHZ, MXZ-4F83VFHZ**

No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
1	Outdoor unit does not operate.	Lit	Once	LEV and drain pump	The indoor unit detects an abnormality in the LEV and drain pump.	<ul style="list-style-type: none"> <li>Refer to 12-6. Ⓒ "Check of LEV".</li> <li>Check the drain pump of the indoor unit.</li> </ul>
2		Lit	Twice	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started, or converter protection cut-out or bus-bar voltage protection cut-out operates 3 consecutive times within 3 minutes after startup.	<ul style="list-style-type: none"> <li>Check the connection of the compressor connecting wire.</li> <li>Refer to 12-6. Ⓒ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> </ul>
3		Lit	3 times	Discharge temperature thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor after 10 minutes of compressor startup.	<ul style="list-style-type: none"> <li>Refer to 12-6. Ⓓ "Check of outdoor thermistors".</li> </ul>
4		Lit	4 times	Fin temperature thermistor	A short or open circuit is detected in the thermistor during operation.	<ul style="list-style-type: none"> <li>Refer to 12-6. Ⓓ "Check of outdoor thermistors".</li> </ul>
				P. C. board temperature thermistor		<ul style="list-style-type: none"> <li>Replace the outdoor control P.C. board.</li> </ul>
5		Lit	5 times	Ambient temperature thermistor	A short or open circuit is detected in the thermistor during operation.	<ul style="list-style-type: none"> <li>Refer to 12-6. Ⓓ "Check of outdoor thermistors".</li> </ul>
				Outdoor heat exchanger temperature thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor after 5 minutes (in cooling) and 10 minutes (in heating) of compressor startup.	
				Defrost thermistor	A short circuit is detected in the thermistor during operation, or an open circuit is detected in the thermistor after 5 minutes of compressor startup.	
6		Lit	6 times	Zero cross detecting circuit (Outdoor control P.C. board)	Zero cross signal cannot be detected.	<ul style="list-style-type: none"> <li>Replace the outdoor control P.C. board.</li> </ul>
7		Lit	7 times	Outdoor control system	The nonvolatile memory data cannot be read properly.	<ul style="list-style-type: none"> <li>Replace the outdoor control P.C. board.</li> </ul>
8		Lit	8 times	Current sensor	Current sensor protection cut-out operates 2 consecutive times.	<ul style="list-style-type: none"> <li>Replace the outdoor power P.C. board.</li> </ul>
9		Lit	11 times	Communication error between P.C. boards	The communication protection cut-out between boards operates 2 consecutive times.	<ul style="list-style-type: none"> <li>Check the connecting wire between outdoor control P.C. board and outdoor power P.C. board.</li> </ul>
				M-NET communication error	M-NET adapter P.C. board detects an abnormality in the communication error.	<ul style="list-style-type: none"> <li>Check the connecting wire between M-NET adapter P.C. board and outdoor control P.C. board, or terminal block.</li> </ul>
10	Lit	12 times	Zero cross detecting circuit (Outdoor power P.C. board)	The protection cut-out of the zero cross detecting circuit operates 10 consecutive times.	<ul style="list-style-type: none"> <li>Replace the outdoor power P.C. board.</li> </ul>	
11	Lit	13 times	Current sensor	A short or open circuit is detected in the input current detection circuit during operation.	<ul style="list-style-type: none"> <li>Replace the outdoor power P.C. board.</li> </ul>	
12	Lit	14 times	Voltage sensor	A short or open circuit is detected in the input voltage detection circuit during operation.	<ul style="list-style-type: none"> <li>Replace the outdoor power P.C. board.</li> </ul>	
13	Lit	15 times	Relay operation	No relay operation is detected during operation.	<ul style="list-style-type: none"> <li>Replace the outdoor power P.C. board.</li> </ul>	
14	Lit	18 times	Detection of refrigerant (Indoor unit)	<ol style="list-style-type: none"> <li>Refrigerant leaks from the piping or the heat exchanger in the indoor unit.</li> <li>The following items are used around the indoor unit. <ul style="list-style-type: none"> <li>Spray (LP gas including Freon, and whose main ingredient is propane and butane)</li> <li>Aerosol insecticide (including ethanol)</li> <li>Air spray painting (including dichloromethane)</li> <li>Charcoal (charcoal fire)</li> <li>Chemicals (such as ethanol)</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>Turn off the power after the indoor unit finishes its fan operation. (The fan operation continues for 3 hours.)</li> <li>Check the indoor unit to detect the part where refrigerant leaks.</li> <li>Repair the part where refrigerant leaks.</li> <li>Turn on the power again.</li> <li>Replace the refrigerant sensor if the problem is not fixed.</li> </ul>	
15	Lit	19 times	Abnormality of refrigerant leakage sensor (Indoor unit)	The refrigerant sensor mounted on the indoor unit does not work. The refrigerant sensor is not connected properly or the wire is broken.	<ul style="list-style-type: none"> <li>Connect the connector of the refrigerant sensor properly.</li> <li>Replace the refrigerant sensor.</li> </ul>	
16	Lit	20 times	Incompatible unit combination error	The indoor unit which is not compatible with the outdoor unit is connected.	<ul style="list-style-type: none"> <li>Replace the indoor unit with the one which is compatible with the outdoor unit.</li> </ul>	
17	'Outdoor unit stops and restarts 3 minutes later' is repeated.	Twice	Not lit	IPM protection	Overcurrent is detected after 30 seconds of compressor startup.	<ul style="list-style-type: none"> <li>Reconnect compressor connector.</li> <li>Refer to 12-6. Ⓒ "How to check inverter/compressor".</li> <li>Check the stop valve.</li> <li>Check the power module (PAM module).</li> </ul>
				Lock protection	Overcurrent is detected within 30 seconds of compressor startup.	
18		3 times	Not lit	Discharge temperature protection	The discharge temperature exceeds 115°C (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3)/106°C (MXZ-4F83/5F102VF, MXZ-2F53VFHZ)/116°C (MXZ-6F122VF, MXZ-4F83VFHZ) during operation. Compressor can restart if discharge temperature thermistor reads 80°C (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3)/95°C (MXZ-4F83/5F102VF, MXZ-2F53VFHZ)/100°C (MXZ-6F122VF, MXZ-4F83VFHZ) or less 3 minutes later.	
19	4 times	Not lit	Fin temperature protection	The fin temperature exceeds during operation.	<ul style="list-style-type: none"> <li>Check refrigerant circuit and refrigerant amount.</li> <li>Refer to 12-6. Ⓒ "Check of outdoor fan motor".</li> </ul>	
			P.C. board temperature protection	The P.C. board temperature exceeds during operation.		

No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy
		LED1(Red)	LED2(Yellow)			
20	'Outdoor unit stops and restarts 3 minutes later' is repeated.	5 times	Not lit	High pressure protection	High pressure is detected with the high pressure switch (HPS) during operation. The outdoor heat exchanger temperature exceeds 70°C during cooling or the indoor gas pipe temperature exceeds 70°C during heating.	<ul style="list-style-type: none"> <li>• Check around of gas and the refrigerant circuit.</li> <li>• Check the stop valve.</li> </ul>
21		6 times	Not lit	Pre-heating protection	Overcurrent is detected during pre-heating.	<ul style="list-style-type: none"> <li>• Reconnect compressor connector.</li> <li>• Refer to 12-6. Ⓒ "How to check inverter/compressor".</li> <li>• Check the power module.</li> </ul>
22		8 times	Not lit	Converter protection	A failure is detected in the operation of the converter during operation.	<ul style="list-style-type: none"> <li>• Replace the outdoor power P.C. board.</li> </ul>
23		9 times	Not lit	Bus-bar voltage protection	The bus-bar voltage exceeds 400 V or falls to low level during compressor operating.	<ul style="list-style-type: none"> <li>• Check the voltage of power supply.</li> <li>• Replace the outdoor power P.C. board or the outdoor control P.C. board.</li> <li>• Refer to 12-6. Ⓓ "Check of bus-bar voltage".</li> </ul>
24		11 times	Not lit	Low outside temperature protection(cooling)	The ambient became -12°C or less.	—
25		13 times	Not lit	Outdoor fan motor	A failure occurs 3 consecutive times within 30 seconds after the fan gets started.	<ul style="list-style-type: none"> <li>• Refer to 12-6. Ⓔ "Check of outdoor fan motor".</li> </ul>
26		Lit	8 times	Current sensor protection	A short or open circuit is detected in the current sensor during compressor operating.	<ul style="list-style-type: none"> <li>• Replace the outdoor power P.C. board.</li> </ul>
27		Lit	11 times	Communication between P.C. boards protection	Communication error occurs between the outdoor control P.C. board and outdoor power P.C. board for more than 10 seconds.	<ul style="list-style-type: none"> <li>• Check the connecting wire between outdoor control P.C. board and outdoor power P.C. board.</li> </ul>
28		Lit	12 times	Zero cross detecting circuit (Outdoor power P.C. board)	Zero cross signal cannot be detected while the compressor is operating.	<ul style="list-style-type: none"> <li>• Replace the outdoor power P.C. board.</li> </ul>
29	Outdoor unit operates.	Once	Lit	Primary current protection	The input current exceeds 13.6 A (MXZ-2F53VFHZ)/15 A (MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3)/18.4 A (MXZ-4F83/5F102VF)/26.8 A (MXZ-6F122VF)/25 A (MXZ-4F83VFHZ).	<p>These symptoms do not mean any abnormality of the product, but check the following points.</p> <ul style="list-style-type: none"> <li>• Check if indoor filters are clogged.</li> <li>• Check if refrigerant is short.</li> <li>• Check if indoor/outdoor unit air circulation is short cycled.</li> </ul>
30		Twice	Lit	High pressure protection Defrosting in cooling	The indoor gas pipe temperature exceeds 45°C during heating. The indoor gas pipe temperature falls 3°C or below during cooling.	
31		3 times	Lit	Discharge temperature protection	The frequency of the compressor is kept 80 Hz or more and the discharge temperature is kept under 50°C(COOL mode)/40°C(HEAT mode) for more than 40 minutes.	
32		4 times	Lit	Low discharge temperature protection	The frequency of the compressor is kept 80 Hz or more and the discharge temperature is kept under 39°C for more than 20 minutes.	<ul style="list-style-type: none"> <li>• Refer to 12-6. Ⓒ "Check of LEV".</li> <li>• Check refrigerant circuit and refrigerant amount.</li> </ul>
33		5 times	Lit	Cooling high pressure protection	The outdoor heat exchanger temperature exceeds 58°C during operation.	<p>This symptom does not mean any abnormality of the product, but check the following points.</p> <ul style="list-style-type: none"> <li>• Check if indoor filters are clogged.</li> <li>• Check if refrigerant is short.</li> <li>• Check if indoor/outdoor unit air circulation is short cycled.</li> </ul>
34		7 times	Lit	High → Low Pressure bypass valve Cooling evaporating temperature drop prevention control	<b>MXZ-MXZ-3F54/3F68/4F72VF/VF2/VF3/4F80VF2/VF3</b> During cooling operation, the temperature of indoor heat exchanger becomes 3°C or less within 1 hour after the compressor starts running, or it becomes less than 12°C - 16°C* later than that. * It depends on the difference between the set temperature and the room temperature.	
34		7 times	Lit	High → Low pressure bypass valve High pressure protection control at startup of heating operation	<b>MXZ-6F122VF, MXZ-4F83VFHZ</b> The room temperature is 24°C or more when 1 or 2 unit(s) start(s) the heating operation.	<p>This symptom does not mean any abnormality of the product, but check the following points.</p> <ul style="list-style-type: none"> <li>• Check the indoor filters are not clogged.</li> <li>• Check there is sufficient refrigerant.</li> <li>• Check the indoor/outdoor unit air circulation is not short cycled.</li> </ul>
	High → Low pressure bypass valve Compressor oil tempering control at startup of heating operation			<b>MXZ-6F122VF, MXZ-4F83VFHZ</b> Both the following are true: • The outside temperature is -2°C or less when the heating operation is started. • [(Discharge temperature) - (Indoor heat exchanger temperature)] < 5°C		
35	11 times	Lit	M-NET communication error	M-NET adapter P.C. board detects an abnormality in the communication error.	<ul style="list-style-type: none"> <li>• Check the connecting wire between M-NET adapter P.C. board and outdoor control P.C. board, or terminal block.</li> </ul>	



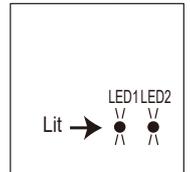
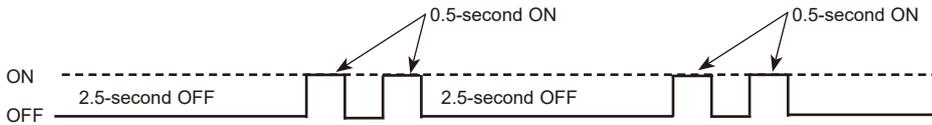
No.	Symptom	Indication		Abnormal point / Condition	Condition	Remedy	
		LED1(Red)	LED2(Yellow)				
36	Outdoor unit operates normally.	8 times	Lit	Cooling evaporating temperature protection	During cooling operation, the temperature of indoor heat exchanger becomes 7°C - 11°C* or less within 1 hour after the compressor starts running, or it becomes 9°C - 17°C* or less later than that. * It depends on the indoor unit type/model or the difference between the set temperature and the room temperature.	This symptom does not mean any abnormality of the product.	
37		9 times	Lit	Inverter check mode	The unit is operated with emergency operation switch.		—
38		Lit	Lit	Normal	—		—

NOTE 1. The location of LED is illustrated at the right figure. Refer to 12-7.2.

2. LED is lighted during normal operation.

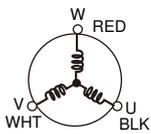
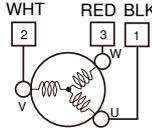
The blinking frequency shows the number of times the LED blinks after every 2.5-second OFF.  
(Example) When the blinking frequency is "2".

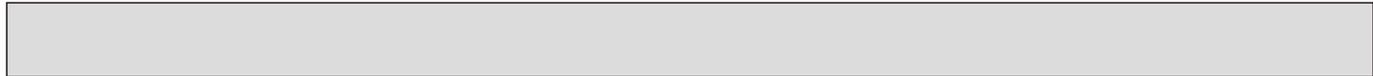
Outdoor control P.C. board (Parts side)

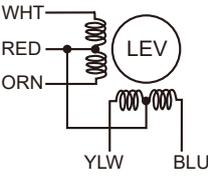


12-5. TROUBLE CRITERION OF MAIN PARTS

- MXZ-2F33VF      MXZ-2F42VF      MXZ-2F53VF      MXZ-2F53VFH
- MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2
- MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3
- MXZ-3F54VF      MXZ-3F68VF      MXZ-4F72VF
- MXZ-3F54VF2    MXZ-3F68VF2    MXZ-4F72VF2    MXZ-4F80VF2
- MXZ-3F54VF3    MXZ-3F68VF3    MXZ-4F72VF3    MXZ-4F80VF3
- MXZ-4F83VF      MXZ-5F102VF     MXZ-6F122VF
- MXZ-2F53VFHZ   MXZ-4F83VFHZ

Part name	Check method and criterion															
Defrost thermistor (RT61) Fin temperature thermistor (RT64) Ambient temperature thermistor (RT65) Outdoor heat exchanger temperature thermistor (RT68)	Measure the resistance with a tester.  Refer to 12-7. "TEST POINT DIAGRAM AND VOLTAGE" 1. "Inverter P.C. board", 2. "Outdoor control P.C. board " or 3. "Outdoor power P.C. board" for the chart of thermistor.															
Discharge temperature thermistor (RT62)	Measure the resistance with a tester. Before measurement, hold the thermistor with your hands to warm it up.  Refer to 12-7. "TEST POINT DIAGRAM AND VOLTAGE" 1. "Inverter P.C. board", 2. "Outdoor control P.C. board ", for the chart of thermistor.															
Compressor  	Measure the resistance between terminals with a tester. (Winding temperature : -10°C - 40°C)  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Normal (Each phase)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; vertical-align: middle;"><b>MXZ-2F33VF/VF2/VF3</b></td> <td style="text-align: center; vertical-align: middle;"> <b>MXZ-2F42VF/VF2/VF3</b>  <b>MXZ-2F53VF/VF2/VF3</b>  <b>MXZ-2F53VFH/VFH2/VFH3</b>  <b>MXZ-3F54VF/VF2/VF3</b> </td> <td style="text-align: center; vertical-align: middle;"> <b>MXZ-3F68VF/VF2/VF3</b>  <b>MXZ-4F72VF/VF2/VF3</b>  <b>MXZ-4F80VF2/VF3</b> </td> </tr> <tr> <td style="text-align: center;">1.59 Ω - 2.16Ω</td> <td style="text-align: center;">0.86 Ω - 1.06 Ω</td> <td style="text-align: center;">0.91 Ω - 1.13 Ω</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Normal (Each phase)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; vertical-align: middle;"> <b>MXZ-4F83VF</b>  <b>MXZ-5F102VF</b>  <b>MXZ-2F53VFHZ</b> </td> <td style="text-align: center; vertical-align: middle;"> <b>MXZ-6F122VF</b>  <b>MXZ-4F83VFHZ</b> </td> </tr> <tr> <td style="text-align: center;">0.83 Ω - 1.03Ω</td> <td style="text-align: center;">0.77 Ω - 0.95 Ω</td> </tr> </tbody> </table>	Normal (Each phase)			<b>MXZ-2F33VF/VF2/VF3</b>	<b>MXZ-2F42VF/VF2/VF3</b> <b>MXZ-2F53VF/VF2/VF3</b> <b>MXZ-2F53VFH/VFH2/VFH3</b> <b>MXZ-3F54VF/VF2/VF3</b>	<b>MXZ-3F68VF/VF2/VF3</b> <b>MXZ-4F72VF/VF2/VF3</b> <b>MXZ-4F80VF2/VF3</b>	1.59 Ω - 2.16Ω	0.86 Ω - 1.06 Ω	0.91 Ω - 1.13 Ω	Normal (Each phase)		<b>MXZ-4F83VF</b> <b>MXZ-5F102VF</b> <b>MXZ-2F53VFHZ</b>	<b>MXZ-6F122VF</b> <b>MXZ-4F83VFHZ</b>	0.83 Ω - 1.03Ω	0.77 Ω - 0.95 Ω
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Outdoor fan motor   <b>MXZ-2F33VF/VF2/VF3</b> <b>MXZ-2F42VF/VF2/VF3</b> <b>MXZ-2F53VF/VF2/VF3</b> <b>MXZ-2F53VFH/VFH2/VFH3</b>	Measure the resistance between lead wires with a tester. (Part temperature : -10°C - 40°C)  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Normal (Each phase)</th> </tr> </thead> <tbody> <tr> <td colspan="2" style="text-align: center;"><b>MXZ-2F33VF/42VF/53VF/53VFH</b></td> </tr> <tr> <td colspan="2" style="text-align: center;">12 Ω - 16 Ω</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="text-align: center; vertical-align: middle;"> <b>MXZ-2F33VF2/42VF2/53VF2/53VFH2</b>  <b>MXZ-2F33VF3/42VF3/53VF3/53VFH3</b> </td> <td style="text-align: center; vertical-align: middle;">32 Ω - 43 Ω</td> </tr> </tbody> </table>	Normal (Each phase)		<b>MXZ-2F33VF/42VF/53VF/53VFH</b>		12 Ω - 16 Ω		<b>MXZ-2F33VF2/42VF2/53VF2/53VFH2</b> <b>MXZ-2F33VF3/42VF3/53VF3/53VFH3</b>	32 Ω - 43 Ω							
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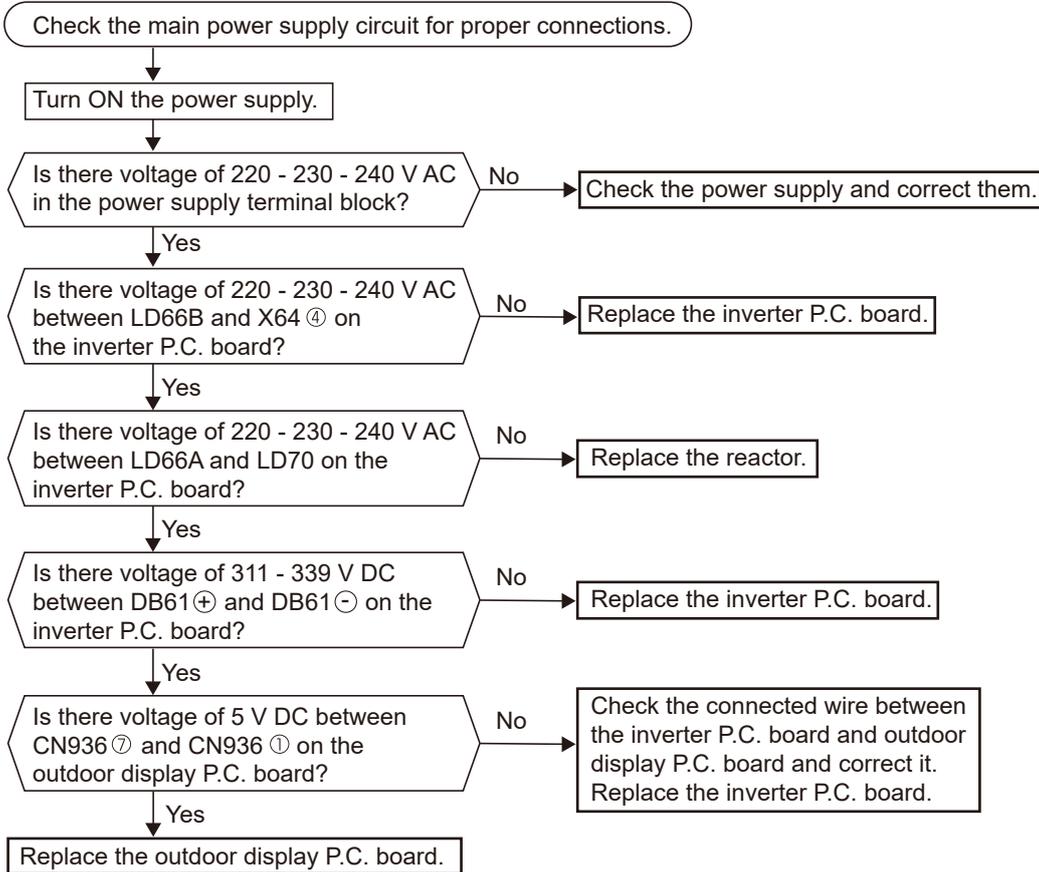
Part name	Check method and criterion																						
R.V. coil	Measure the resistance with a tester. (Part temperature : -10°C - 40°C) <table border="1"> <thead> <tr> <th colspan="2">Normal</th> </tr> </thead> <tbody> <tr> <td><b>MXZ-2F33VF/VF2/VF3</b></td> <td><b>MXZ-3F54VF/VF2/VF3</b></td> </tr> <tr> <td><b>MXZ-2F42VF/VF2/VF3</b></td> <td><b>MXZ-3F68VF/VF2/VF3</b></td> </tr> <tr> <td><b>MXZ-2F53VF/VF2/VF3</b></td> <td><b>MXZ-4F72VF/VF2/VF3</b></td> </tr> <tr> <td><b>MXZ-2F53VFH/VFH2/VFH3</b></td> <td><b>MXZ-4F80VF2/VF3</b></td> </tr> <tr> <td>1.20 kΩ - 1.56 kΩ</td> <td>1.26 kΩ - 1.62 kΩ</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Normal</th> </tr> </thead> <tbody> <tr> <td><b>MXZ-4F83VF</b></td> <td><b>MXZ-6F122VF</b></td> </tr> <tr> <td><b>MXZ-5F102VF</b></td> <td><b>MXZ-4F83VFHZ</b></td> </tr> <tr> <td><b>MXZ-2F53VFHZ</b></td> <td></td> </tr> <tr> <td>1.20 kΩ - 1.77 kΩ</td> <td>1.24 kΩ - 1.86 kΩ</td> </tr> </tbody> </table>	Normal		<b>MXZ-2F33VF/VF2/VF3</b>	<b>MXZ-3F54VF/VF2/VF3</b>	<b>MXZ-2F42VF/VF2/VF3</b>	<b>MXZ-3F68VF/VF2/VF3</b>	<b>MXZ-2F53VF/VF2/VF3</b>	<b>MXZ-4F72VF/VF2/VF3</b>	<b>MXZ-2F53VFH/VFH2/VFH3</b>	<b>MXZ-4F80VF2/VF3</b>	1.20 kΩ - 1.56 kΩ	1.26 kΩ - 1.62 kΩ	Normal		<b>MXZ-4F83VF</b>	<b>MXZ-6F122VF</b>	<b>MXZ-5F102VF</b>	<b>MXZ-4F83VFHZ</b>	<b>MXZ-2F53VFHZ</b>		1.20 kΩ - 1.77 kΩ	1.24 kΩ - 1.86 kΩ
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Linear expansion valve 	Measure the resistance with a tester. (Part temperature : -10°C - 40°C) <table border="1"> <thead> <tr> <th>Color of lead wire</th> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>WHT - RED</td> <td rowspan="4">37.4 Ω - 53.9 Ω</td> </tr> <tr> <td>RED - ORN</td> </tr> <tr> <td>YLW - RED</td> </tr> <tr> <td>RED - BLU</td> </tr> </tbody> </table>	Color of lead wire	Normal	WHT - RED	37.4 Ω - 53.9 Ω	RED - ORN	YLW - RED	RED - BLU															
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Defrost heater <b>MXZ-2F53VFH</b> <b>MXZ-2F53VFH2</b> <b>MXZ-2F53VFH3</b> <b>MXZ-2F53VFHZ</b> <b>MXZ-4F83VFHZ</b>	Measure the resistance with a tester. (Part temperature : -10°C - 40°C) <table border="1"> <thead> <tr> <th>Normal</th> </tr> </thead> <tbody> <tr> <td>349 Ω - 428 Ω</td> </tr> </tbody> </table>	Normal	349 Ω - 428 Ω																				
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## 12-6. TROUBLESHOOTING FLOW

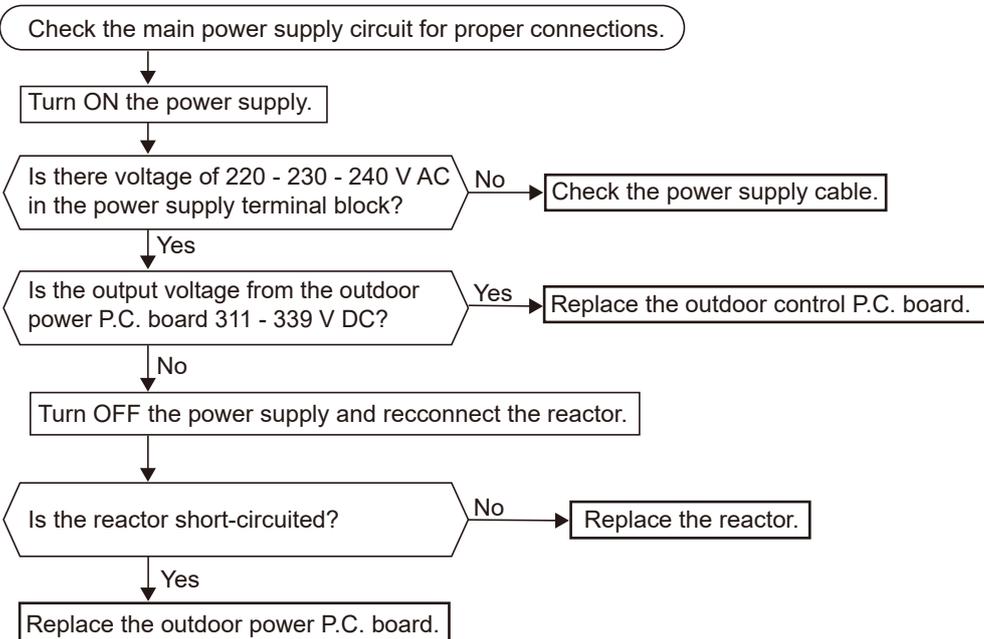
Outdoor unit does not operate.

### Ⓐ Check of power supply

**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH      MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2**  
**MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3**



**MXZ-3F54VF/3F68VF/4F72VF      MXZ-4F83/5F102/6F122VF**  
**MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2      MXZ-2F53/4F83VFHZ**  
**MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3**



- When the indoor unit does not operate, it cannot be operated either with the remote controller or with the EMERGENCY OPERATION switch.
- When the outdoor unit does not operate, the OPERATION INDICATOR lamp on the indoor unit blinks ON and OFF every 0.5-second.

**Ⓑ How to check miswiring and serial signal error (when outdoor unit does not work)**

**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3**

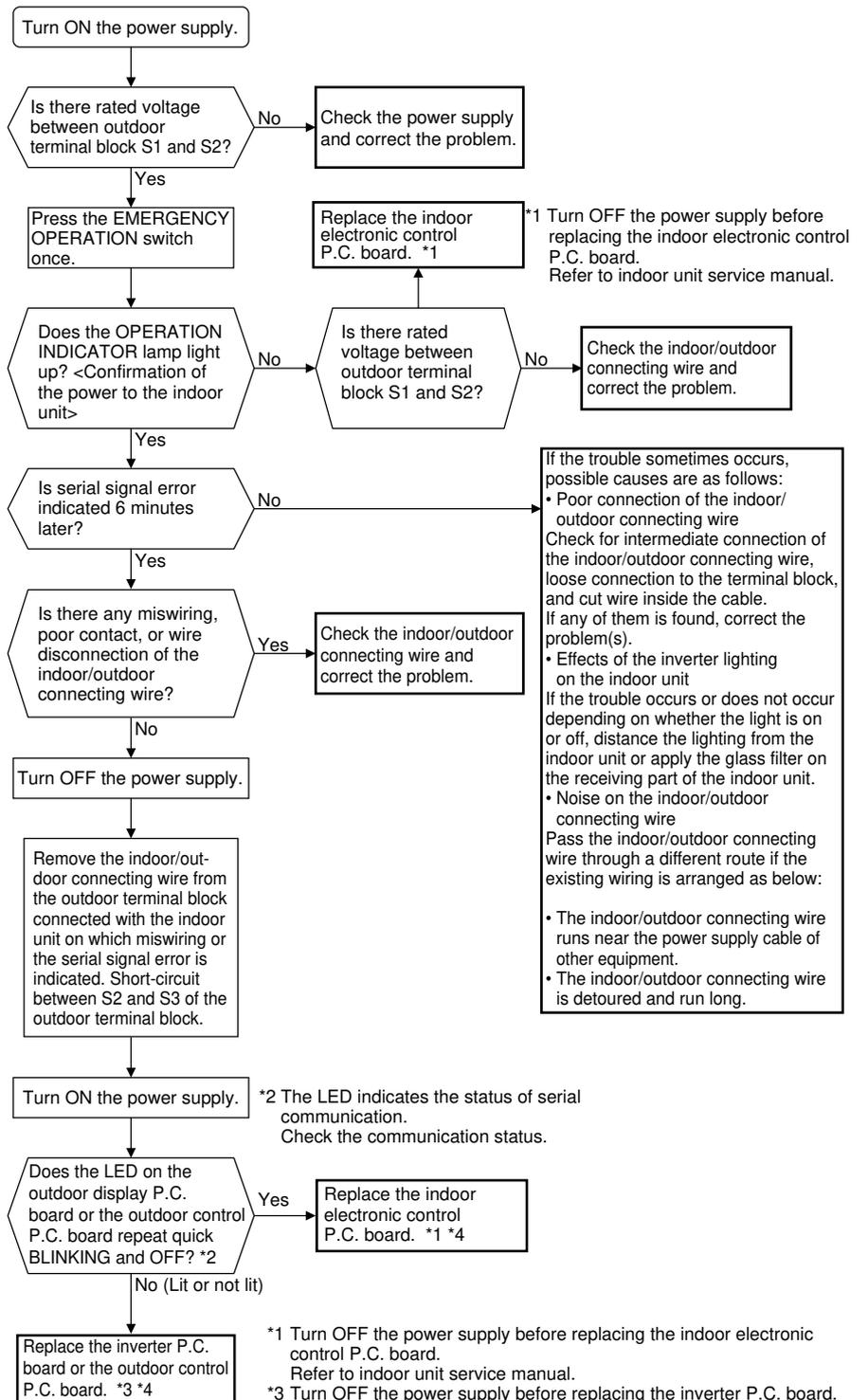
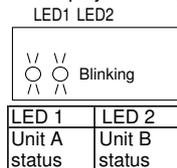
**LED indication for communication status**

Communication status is indicated by the LED.

**Unit status**

Blinking: normal communication  
Lighted: abnormal communication or not connected  
Not lighted: The outdoor P.C. board is abnormal.  
NOTE: "Lighted" and "Not lighted" in the table below does not indicate abnormal.

**Outdoor display P.C. board**



\*2 The LED indicates the status of serial communication. Check the communication status.

- \*1 Turn OFF the power supply before replacing the indoor electronic control P.C. board. Refer to indoor unit service manual.
- \*3 Turn OFF the power supply before replacing the inverter P.C. board. Be careful of residual voltage of smoothing capacitor.
- \*4 Remove the short-circuit between outdoor terminal block S2 and S3. Connect the indoor/outdoor connecting wire.

**MXZ-3F54VF/3F68VF/4F72VF**  
**MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2**  
**MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3**

**MXZ-4F83/5F102/6F122VF**

**MXZ-2F53/4F83VFHZ**

**LED indication**

**for communication status**

Communication status is indicated by the LED.

Unit status

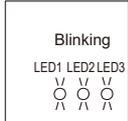
Blinking: normal communication

Lighting: abnormal communication or not connected

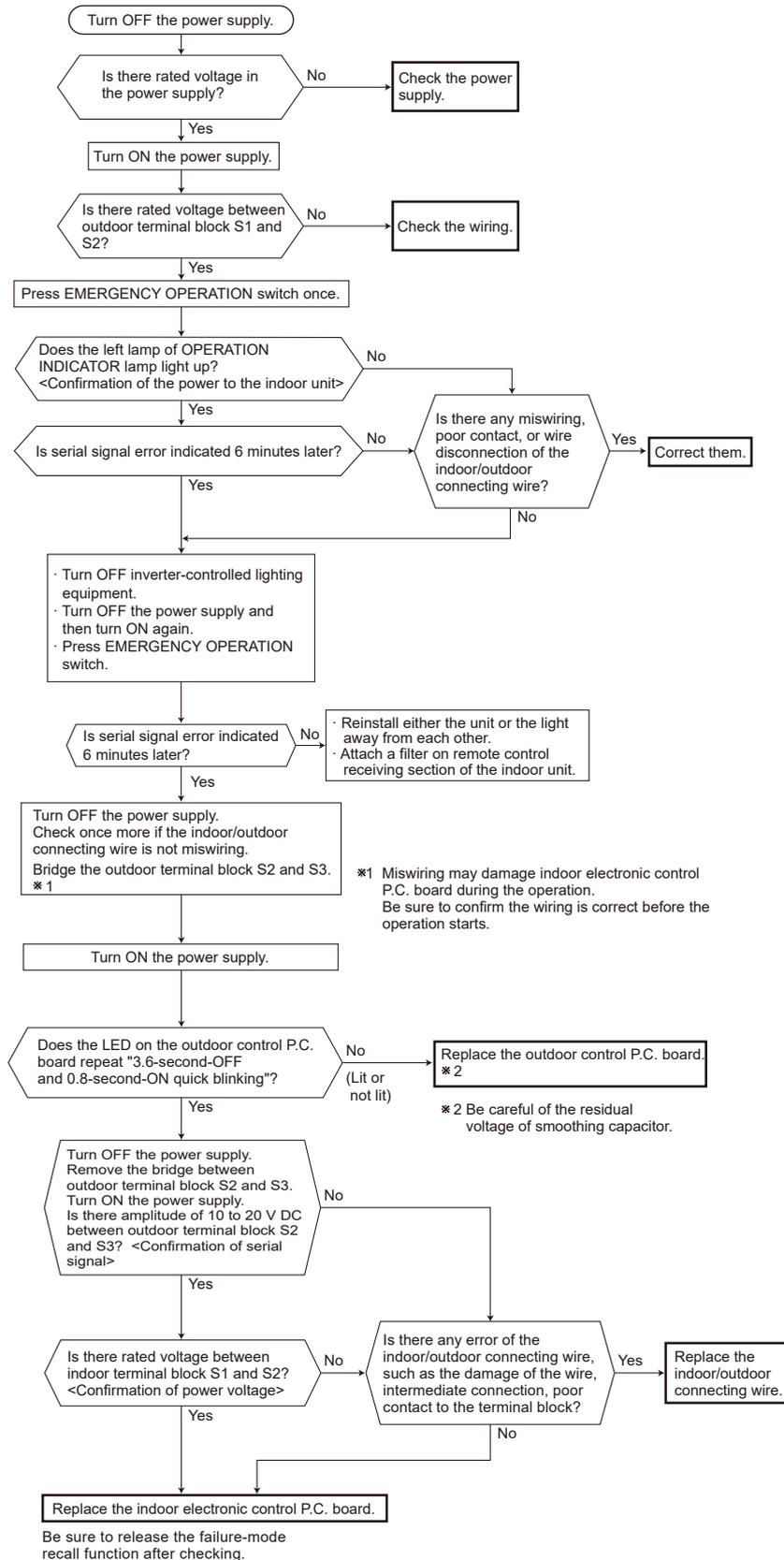
Pattern 1 and 2 is repeatedly displayed alternately. Each pattern is displayed for 10 seconds.

**NOTE:** "Lighting" in the table below does not indicate abnormal communication.

Outdoor control P.C. board



Pattern	LED 1	LED 2	LED 3
1	Unit A status	Unit B status	Lit
2	Unit C status	Unit D status	Not lit



The cooling operation or heating operation does not operate.

© Check of R.V. coil

**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH**  
**MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2**  
**MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3**

Connector	<b>MXZ-2F</b>
CN721	Inverter P.C. board

• The heating operation does not operate.

1. Disconnect the lead wire leading to the compressor.
2. 3 minutes after turning ON the power supply, start EMERGENCY OPERATION in HEAT mode.

Is there voltage of 220 - 230 - 240 V AC between pin1 and pin2 at connector CN721?

No

Replace the inverter P.C. board.

Yes

Turn OFF the power supply. Disconnect the connector CN721.

Is there normal resistance to R.V. coil?  
(Refer to 12-5.)

No

Replace the R.V. coil.

Yes

Replace the 4-way valve.

• The cooling operation does not operate.

1. Disconnect the lead wire leading to the compressor.
2. 3 minutes after turning ON the power supply, start EMERGENCY OPERATION in COOL mode.

Is there voltage of 220 - 230 - 240 V AC between pin1 and pin2 at connector CN721?

Yes

Replace the inverter P.C. board.

No

Replace the 4-way valve.

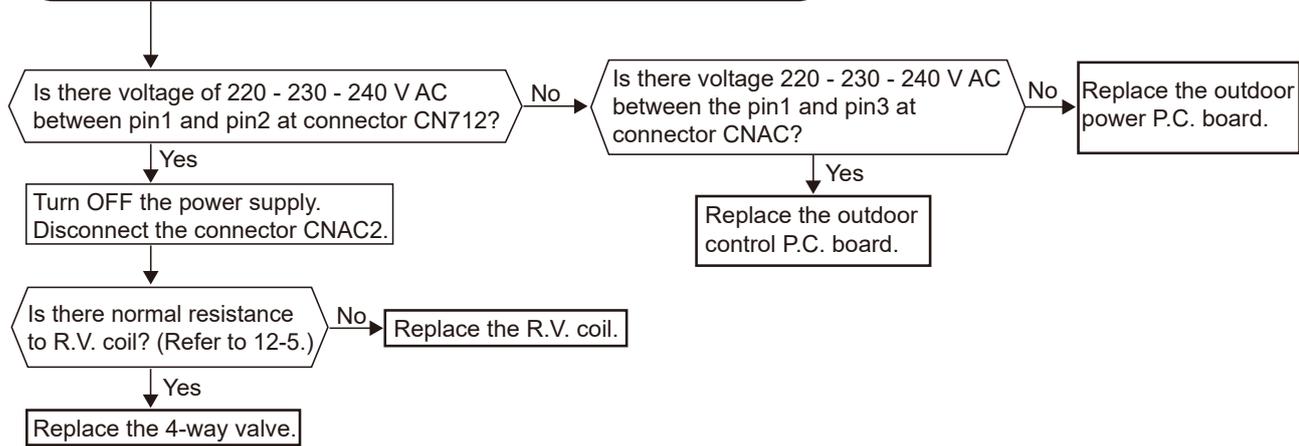
**MXZ-3F54VF/3F68VF/4F72VF**  
**MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2**  
**MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3**

**MXZ-4F83/5F102/6F122VF**  
**MXZ-2F53/4F83VFHZ**

Connector	<b>MXZ-3F, 4F, 5F, 6F 2F53/4F83VFHZ</b>
CNAC CN712	Outdoor control P.C. board
CNAC2	Outdoor power P.C. board

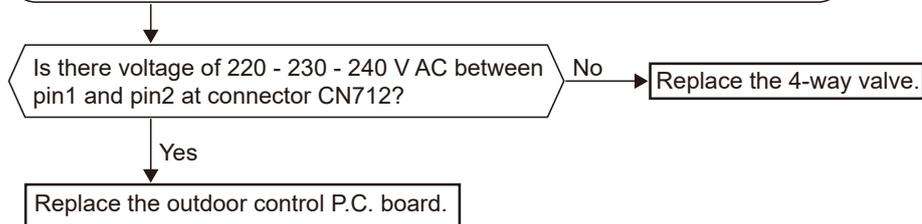
**• When cooling operation does not work.**

1. Disconnect the lead wire leading to the compressor.
2. 3 minutes after turning ON the power supply, start EMERGENCY OPERATION in COOL mode.



**• When heating operation does not work.**

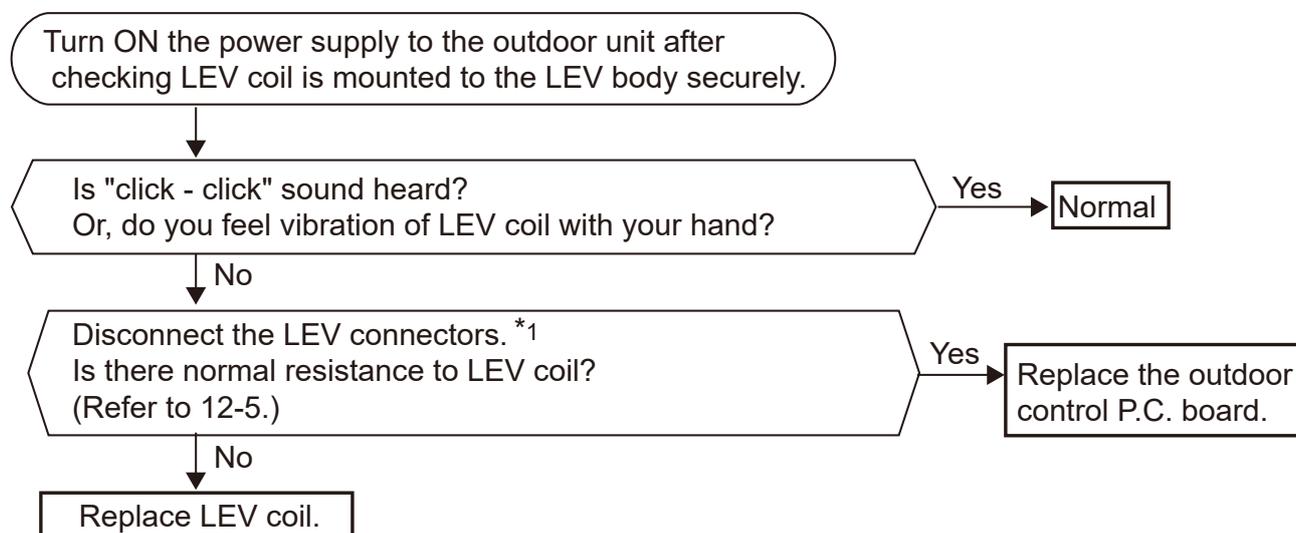
1. Disconnect the lead wire leading to the compressor.
2. 3 minutes after turning ON the power supply, start EMERGENCY OPERATION in HEAT mode.



- When cooling, heat exchanger of non-operating indoor unit frosts.
- When heating, non-operating indoor unit gets warm.

① Check of LEV

Connector	MXZ-2F	MXZ-3F, 4F, 5F,6F 2F53/4F83VFHZ
CN724 CN725	Inverter P.C. board	—
CN791 CN792 CN793 CN794 CN795 CN796 CN797	—	Outdoor control P.C. board



\*1

LEV Connector	LEV	MXZ-2F	MXZ-3F	MXZ-4F72 MXZ-4F80VF	MXZ-4F83VF	MXZ-5F	MXZ-6F	MXZ-2F53VFHZ	MXZ-4F83VFHZ
CN724	LEV A	●	—	—	—	—	—	—	—
CN725	LEV B	●	—	—	—	—	—	—	—
CN791	LEV A	—	●	●	●	●	●	●	●
CN792	LEV B	—	●	●	●	●	●	●	●
CN793	LEV C	—	●	●	●	●	●	—	●
CN794	LEV D	—	—	●	●	●	●	—	●
CN795	LEV E	—	—	—	—	●	●	—	—
CN796	LEV F	—	—	—	—	—	●	—	—
CN797	LEV R	—	●	●	—	—	—	—	—

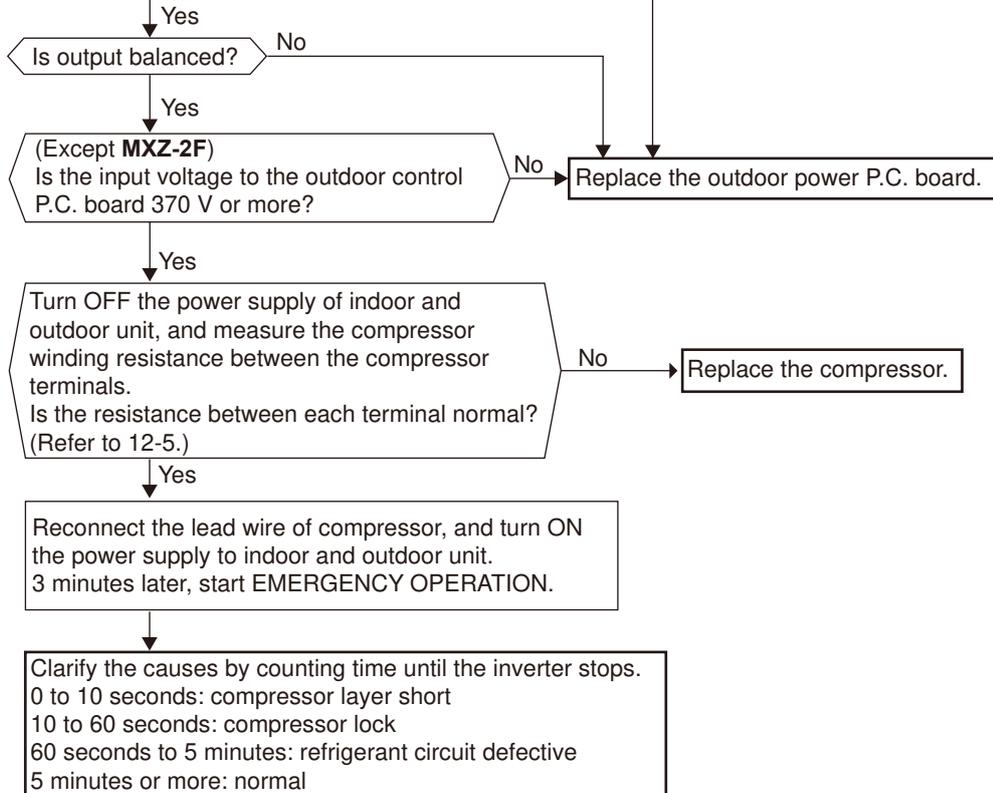
- When heating, room does not get warm.
- When cooling, room does not get cool.

### ⑤ How to check inverter/compressor

Disconnect the terminal of the compressor or the connector (CNMC) between the compressor and the outdoor power P.C. board. 3 minutes after the power supply is turned ON, start EMERGENCY OPERATION.

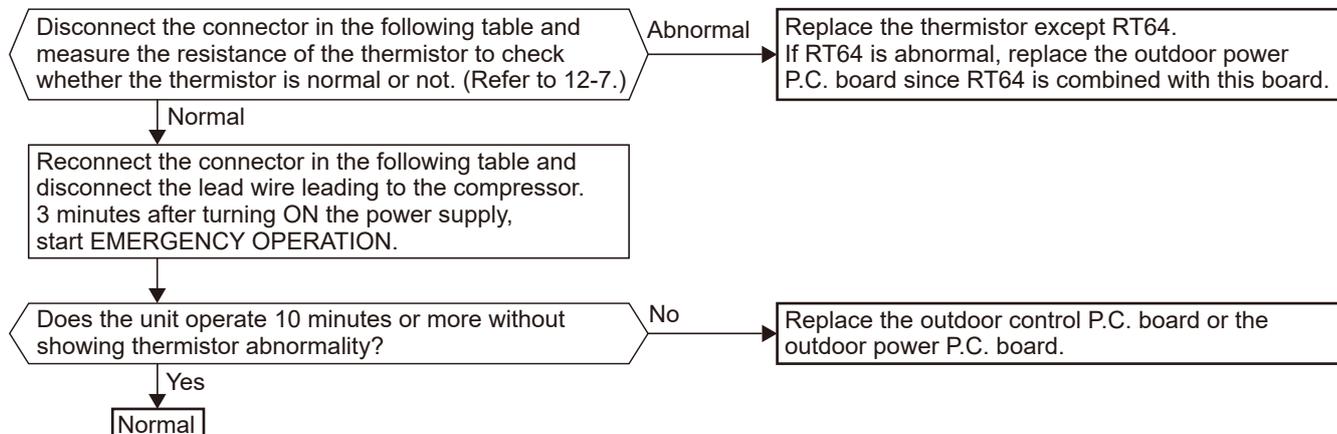
Measure the voltage between each lead wire leading to the compressor.  
 U (BLK) - V (WHT)  
 V (WHT) - W (RED)  
 W (RED) - U (BLK)  
 Output voltage: 50V-250V  
 Is proper output voltage detected?  
 ※1, ※2

- ※1 • After the outdoor fan starts running, wait for 1 minute or more before measuring the voltage.
- The output voltage values have the tolerance of  $\pm 20\%$ .
- ※2 • The output differs depending on the capacity or the number of indoor units to be operated.



• When thermistor is abnormal.

Ⓔ Check of outdoor thermistors



- MXZ-2F33VF/2F42VF/2F53VF
- MXZ-2F33VF2/2F42VF2/2F53VF2
- MXZ-2F33VF3/2F42VF3/2F53VF3
- MXZ-2F53VFH
- MXZ-2F53VFH2
- MXZ-2F53VFH3

Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	CN641 pin1 and pin2	Inverter P.C. board
Discharge temperature	RT62	CN641 pin3 and pin4	
Fin temperature	RT64	CN642 pin1 and pin2	
Ambient temperature	RT65	CN643 pin1 and pin2	
Outdoor heat exchanger temperature	RT68	CN644 pin1 and pin3	

- MXZ-3F54VF/3F68VF/4F72VF
- MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2
- MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3
- MXZ-4F83/5F102/6F112VF
- MXZ-2F53/4F83VFHZ

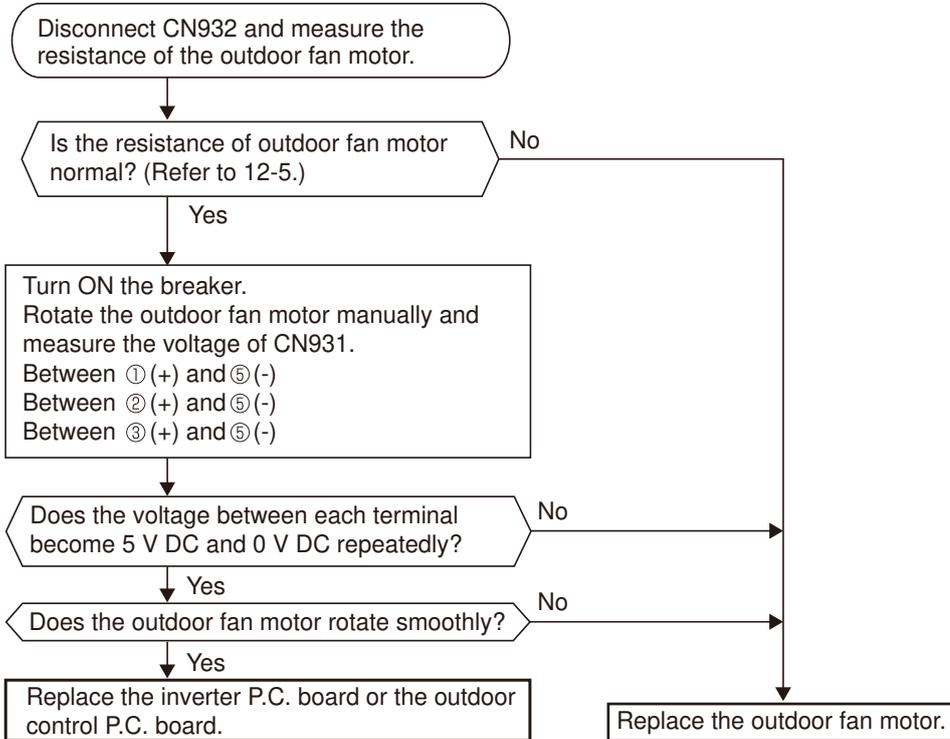
Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	Between CNTH1 pin1 and pin2	Outdoor control P.C. board
Discharge temperature	RT62	Between CNTH1 pin3 and pin4	
Outdoor heat exchanger temperature	RT68	Between CNTH1 pin7 and pin8	
Ambient temperature	RT65	Between CNTH2 pin1 and pin2	Outdoor power P.C. board
Fin temperature	RT64	Between CN171 pin1 and pin2	

• Fan motor does not operate or stops operating shortly after starting the operation.

Ⓒ Check of outdoor fan motor

MXZ-2F33VF/2F42VF/2F53VF/2F53VFH  
 MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2  
 MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3

Connector	MXZ-2F
CN931 CN932	Inverter P.C. board



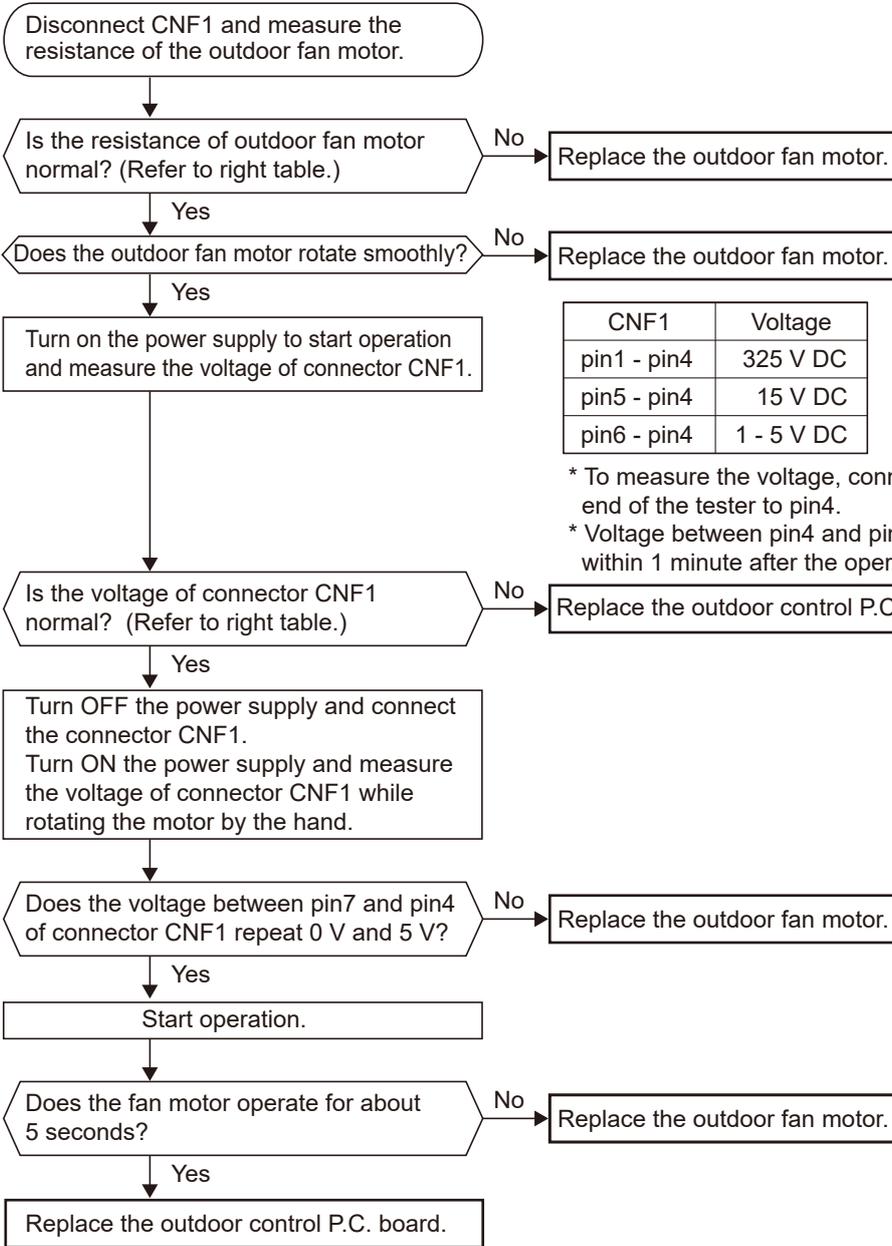
**MXZ-3F54VF/3F68VF/4F72VF**  
**MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2**  
**MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3**

**MXZ-4F83/5F102/6F122VF**  
**MXZ-2F53/4F83VFHZ**

Connector	<b>MXZ-3F, 4F, 5F, 6F 2F53/4F83VFHZ</b>
CNF1	Outdoor control P.C. board

Measuring points	Resistance
pin1 - pin4	∞
pin5 - pin4	60 kΩ
pin6 - pin4	160 kΩ
pin7 - pin4	∞

\* To measure the resistance, connect the negative (-) end of the tester to pin4.



CNF1	Voltage
pin1 - pin4	325 V DC
pin5 - pin4	15 V DC
pin6 - pin4	1 - 5 V DC

\* To measure the voltage, connect the negative (-) end of the tester to pin4.

\* Voltage between pin4 and pin6 should be measured within 1 minute after the operation starts.

- When the operation frequency does not go up from the lowest frequency.

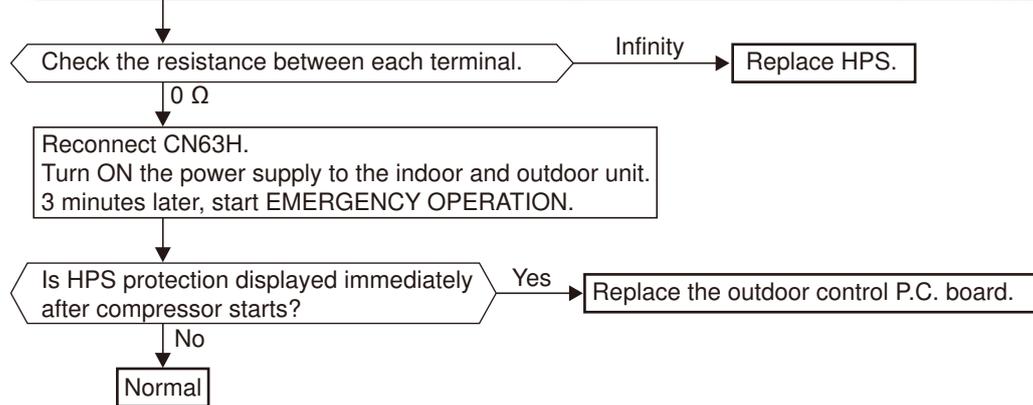
### Ⓜ Check of HPS

MXZ-3F54VF/3F68VF/4F72VF  
 MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2  
 MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3

MXZ-4F83/5F102VF  
 MXZ-2F53/4F83VFHZ

Connector	MXZ-3F, 4F, 5F, 6F 2F53/4F83VFHZ
CN63H	Outdoor control P.C. board

1. Disconnect the connector CN63H in the outdoor control P.C. board.
2. Check the resistance of HPS after 1 minute has passed since the outdoor unit power supply was turned OFF.



### ① The other cases

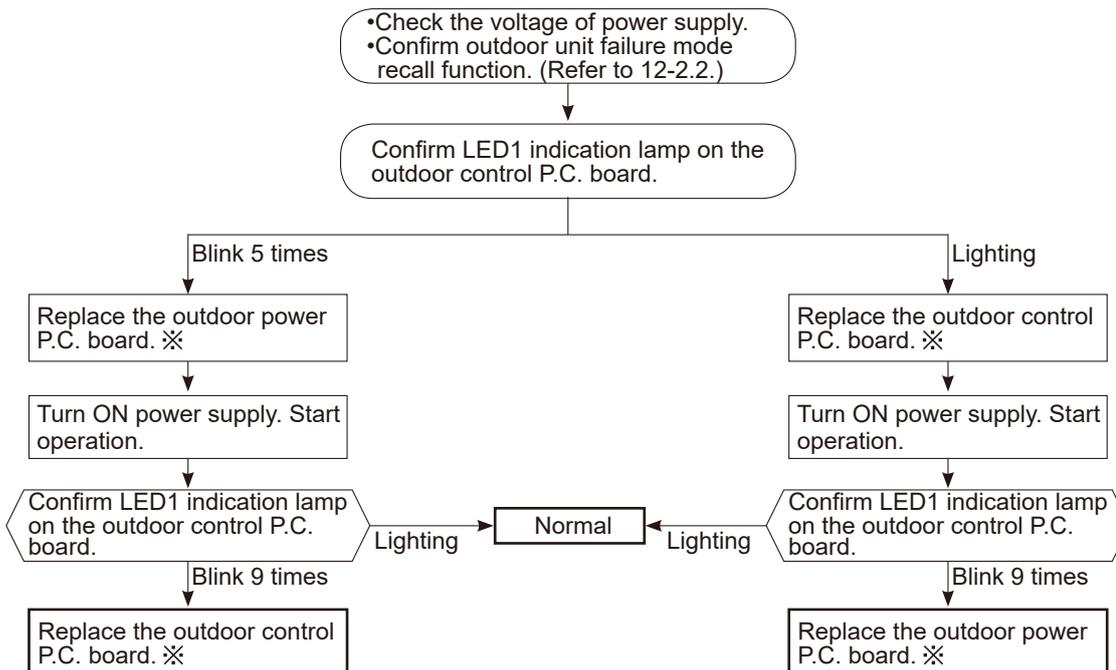
Indoor unit does not operate. (different operating models in multi system)

- When you try to run 2 indoor units simultaneously, one for cooling and the other for heating, the unit which transmits signal to the outdoor unit first decides the operation mode.
- When the above situation occurs, set all the indoor units to the same mode, turn OFF the indoor units, and then turn them back ON.
- Though the top of the indoor unit sometimes gets warm, this does not mean malfunction. The reason is that the refrigerant gas continuously flows into the indoor unit even while it is not operating.

### Ⓜ Check of bus-bar voltage

MXZ-3F54VF/3F68VF/4F72VF  
 MXZ-3F54VF2/3F68VF2/4F72VF2/4F80VF2  
 MXZ-3F54VF3/3F68VF3/4F72VF3/4F80VF3

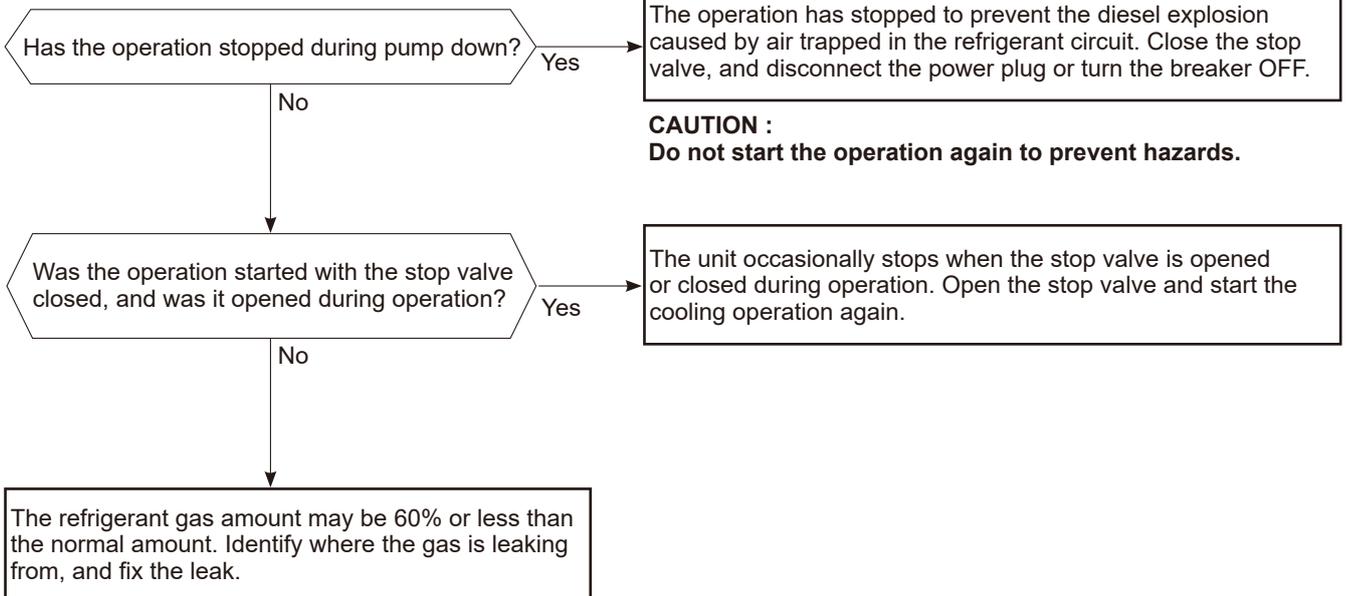
MXZ-4F83/5F102/6F122VF  
 MXZ-2F53/4F83VFHZ



✖ Turn OFF power supply before removing P.C. board.

⌚ **Check of outdoor refrigerant circuit**

**MXZ-2F33VF/2F42VF/2F53VF/2F53VFH**  
**MXZ-2F33VF2/2F42VF2/2F53VF2/2F53VFH2**  
**MXZ-2F33VF3/2F42VF3/2F53VF3/2F53VFH3**  
**MXZ-6F122VF**

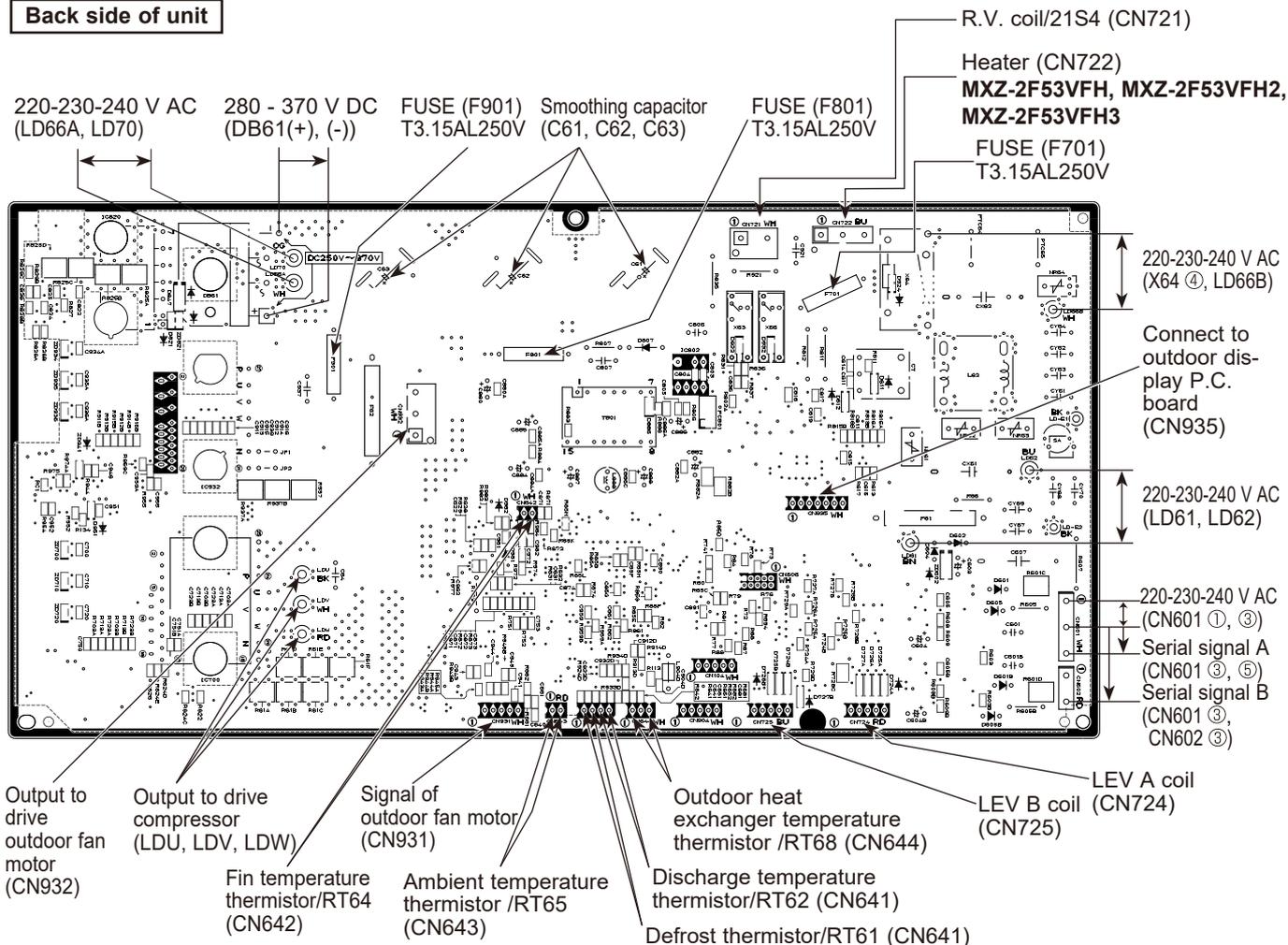


## 12-7. TEST POINT DIAGRAM AND VOLTAGE

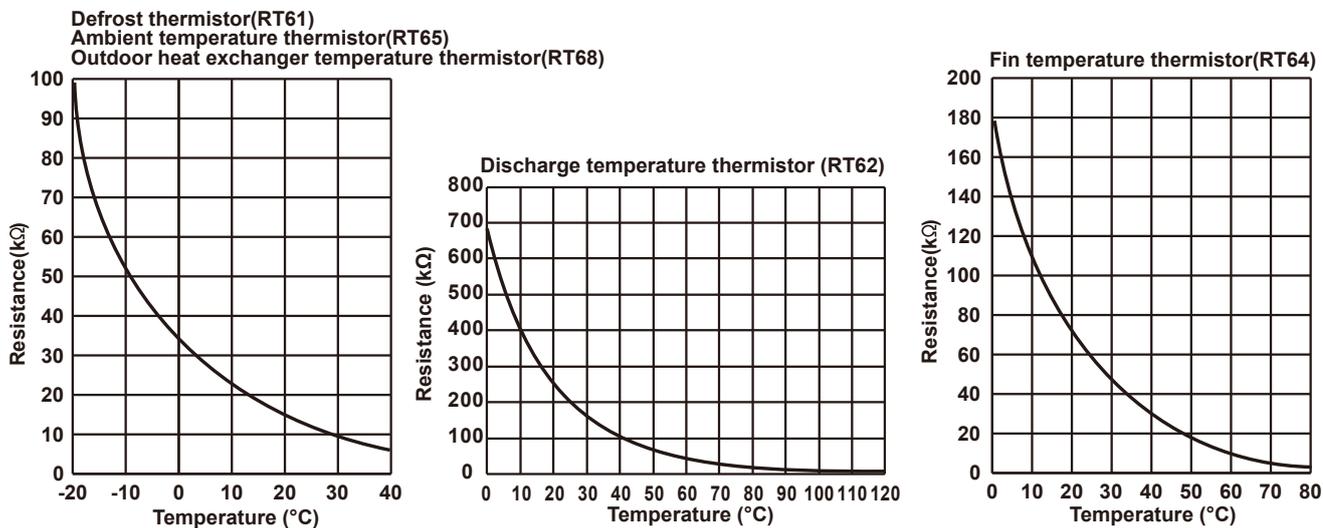
### 1. Inverter P.C. board

MXZ-2F33VF    MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH  
 MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2  
 MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3

#### Back side of unit

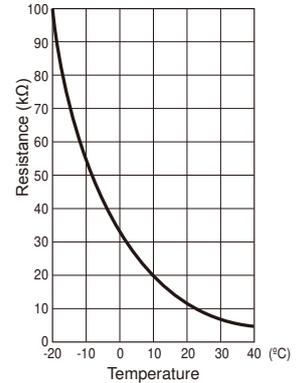


#### Front side of unit

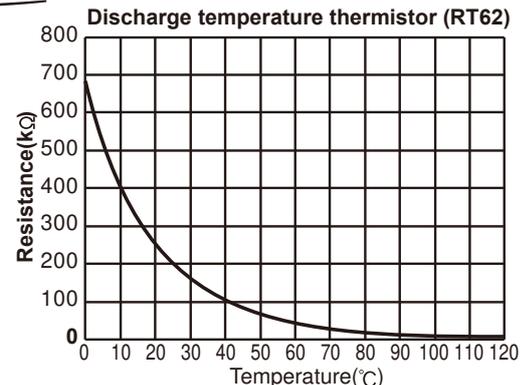
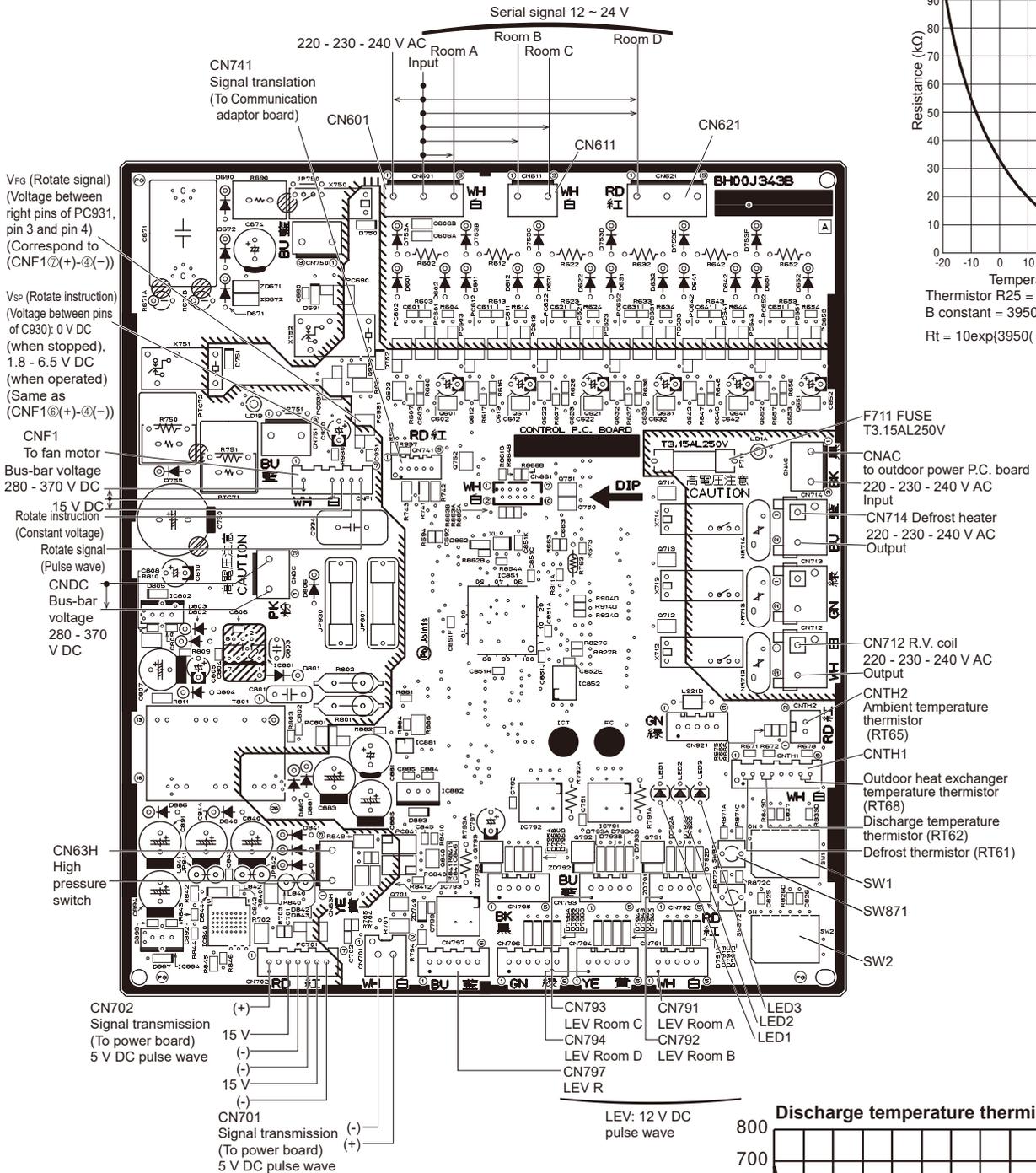


**2. Outdoor control P.C. board**  
**MXZ-3F54VF MXZ-3F68VF MXZ-4F72VF**  
**MXZ-3F54VF2 MXZ-3F68VF2 MXZ-4F72VF2 MXZ-4F80VF2**  
**MXZ-3F54VF3 MXZ-3F68VF3 MXZ-4F72VF3 MXZ-4F80VF3**

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



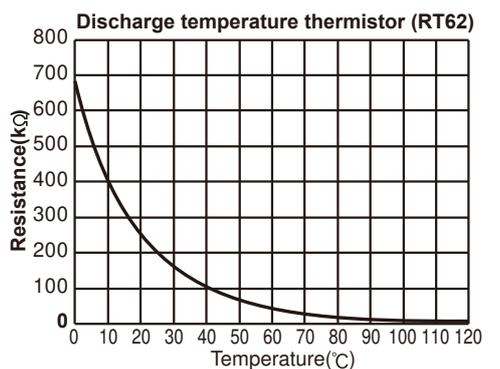
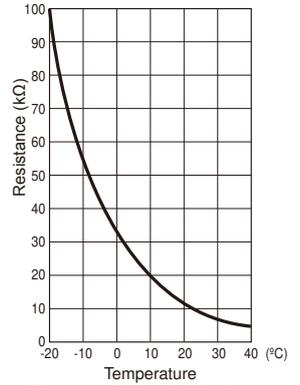
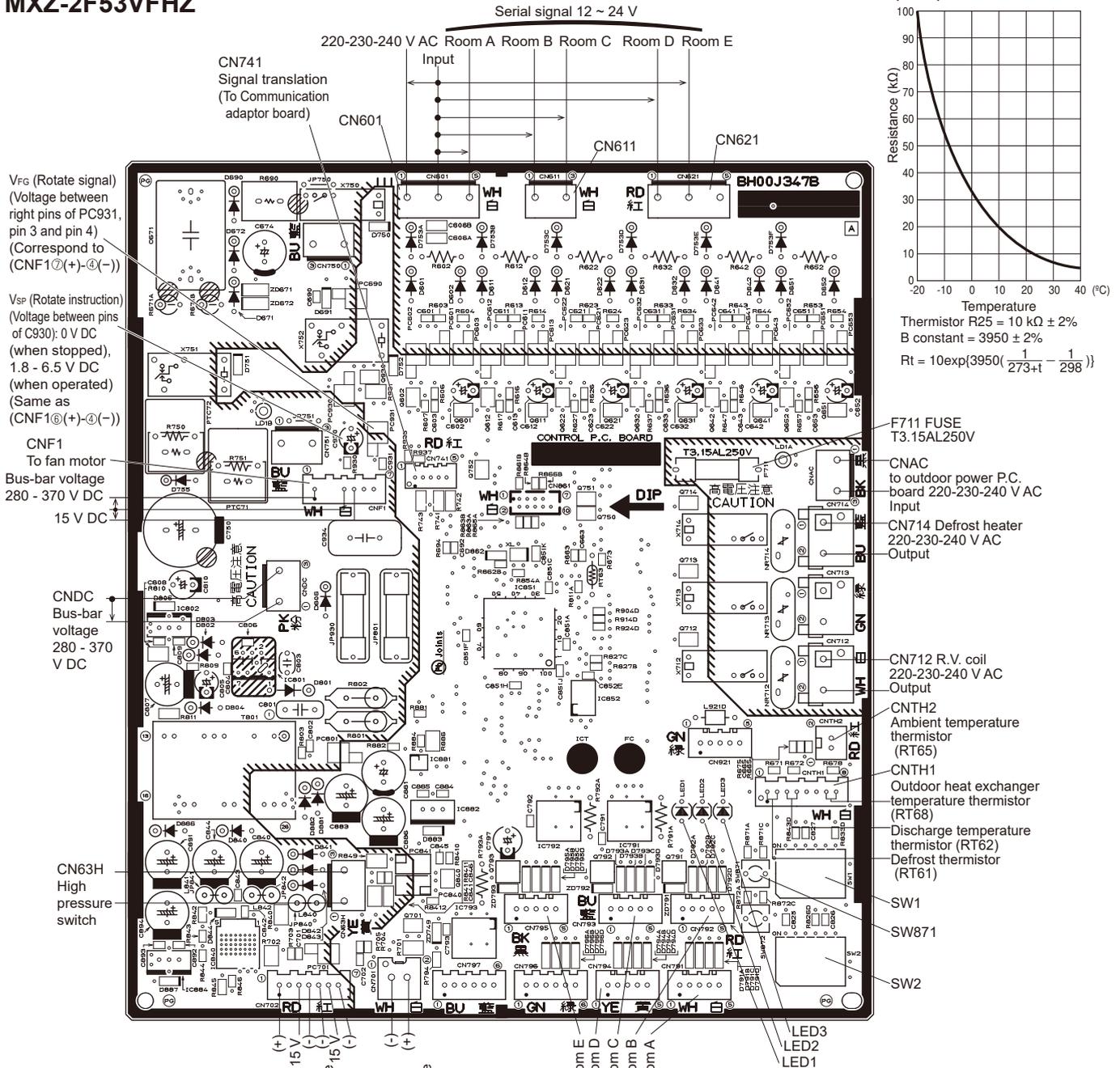
Thermistor R25 = 10 kΩ ± 2%  
 B constant = 3950 ± 2%  
 $R_t = 10 \exp\left\{3950 \left(\frac{1}{273+t} - \frac{1}{298}\right)\right\}$



Thermistor R100 = 13.36 kΩ ± 2%  
 B constant = 4014 ± 2%  
 $R_t = 13.36 \exp\left\{4014 \left(\frac{1}{273+t} - \frac{1}{373}\right)\right\}$

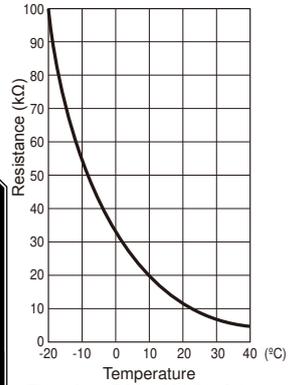
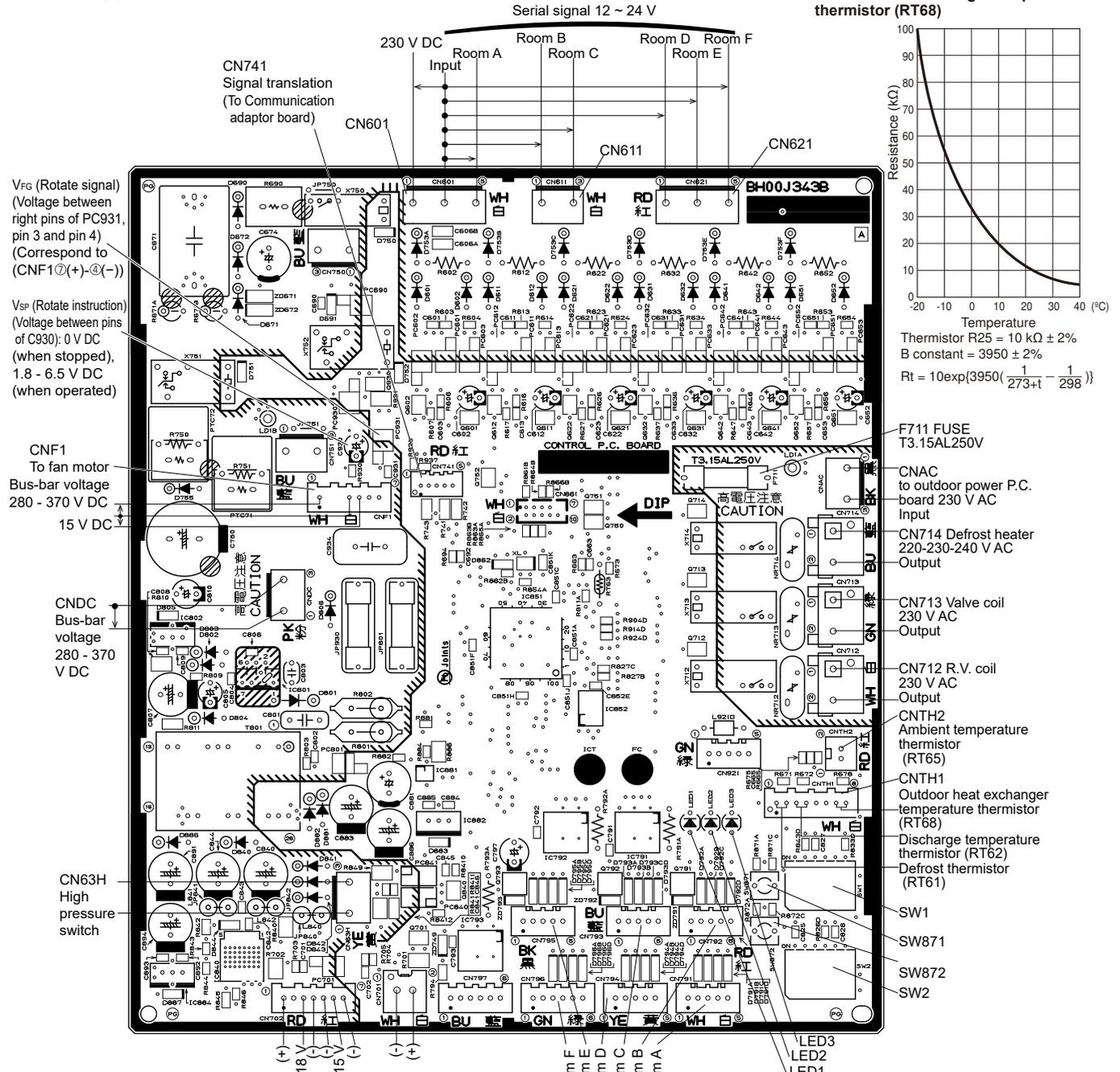
**MXZ-4F83VF**  
**MXZ-5F102VF**  
**MXZ-2F53VFHZ**

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



**MXZ-6F122VF**  
**MXZ-4F83VFHZ**

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



V<sub>FG</sub> (Rotate signal)  
(Voltage between right pins of PC931, pin 3 and pin 4)  
(Correspond to (CNF1⑦(+)-④(-)))

V<sub>SP</sub> (Rotate instruction)  
(Voltage between pins of C930): 0 V DC (when stopped), 1.8 - 6.5 V DC (when operated)

CNF1  
To fan motor  
Bus-bar voltage  
280 - 370 V DC

CNDC  
Bus-bar voltage  
280 - 370 V DC

CN63H  
High pressure switch

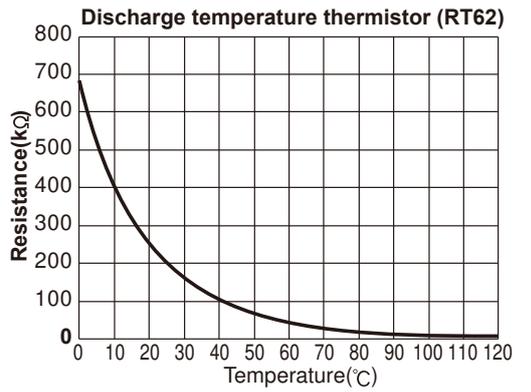
- F711 FUSE  
T3.15A/250V
- CNAC  
to outdoor power P.C. board  
230 V AC Input
- CN714 Defrost heater  
220-230-240 V AC Output
- CN713 Valve coil  
230 V AC Output
- CN712 R.V. coil  
230 V AC Output
- CNTH2  
Ambient temperature thermistor (RT65)
- CNTH1  
Outdoor heat exchanger temperature thermistor (RT68)
- Discharge temperature thermistor (RT62)
- Defrost thermistor (RT61)
- SW1
- SW871
- SW872
- SW2

CN702 Signal transmission  
(To power board)  
5 V DC pulse wave

CN701 Signal transmission  
(To power board)  
5 V DC pulse wave

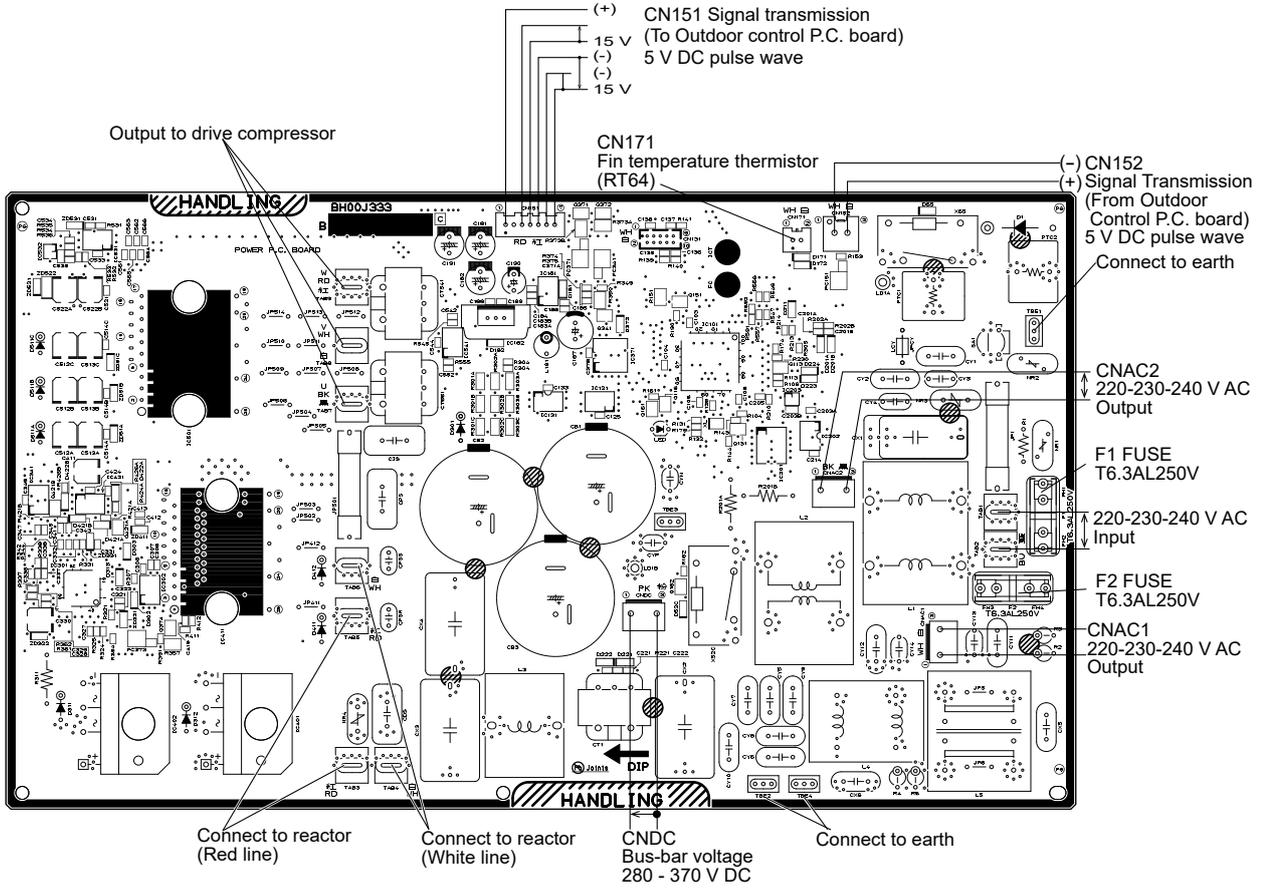
CN796 LEV Room F  
CN795 LEV Room E  
CN794 LEV Room D  
CN793 LEV Room C  
CN792 LEV Room B  
CN791 LEV Room A

LEV: 12 V DC pulse wave

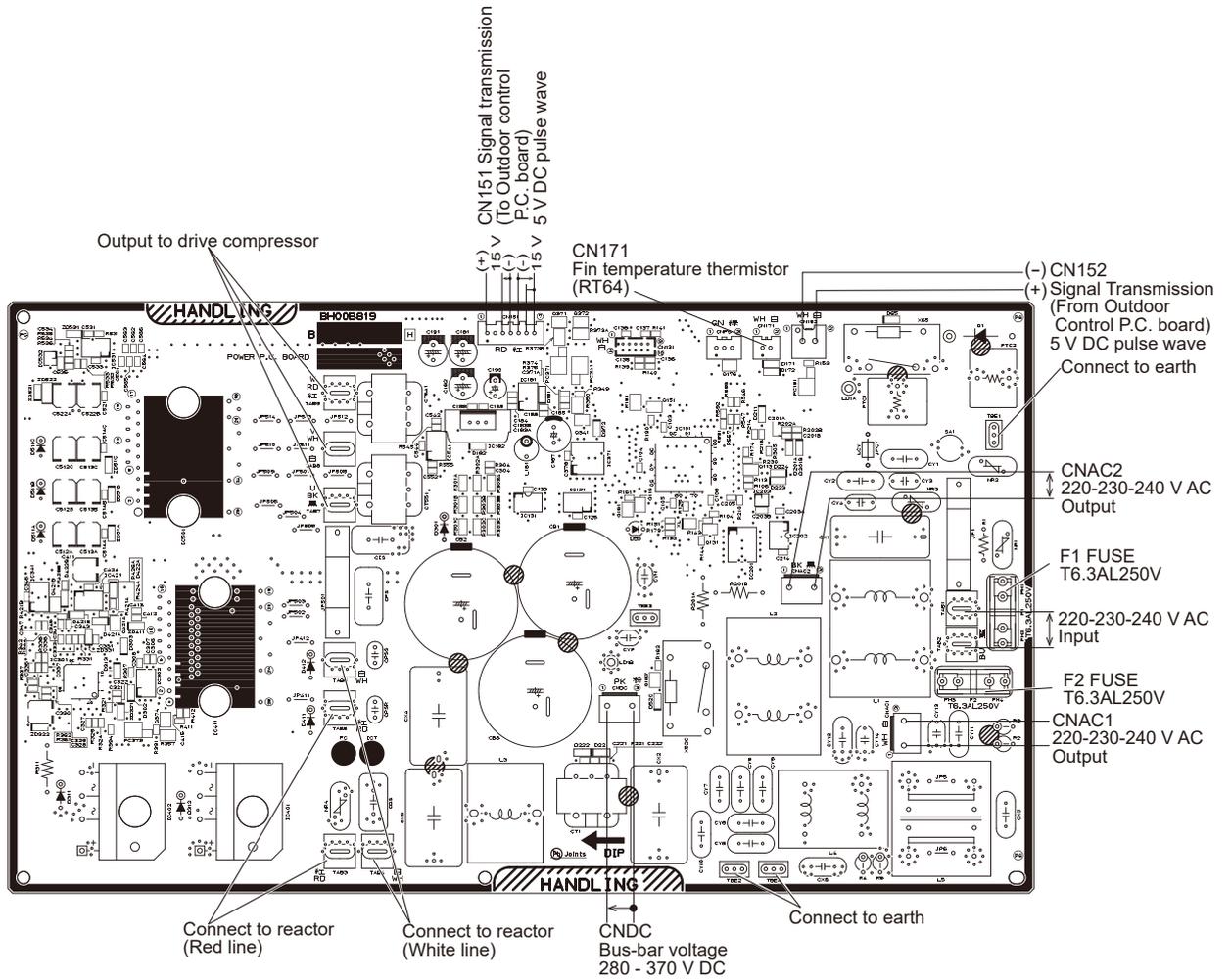


### 3. Outdoor power P.C. board

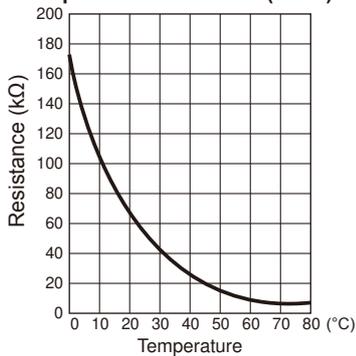
**MXZ-3F54VF MXZ-3F68VF MXZ-4F72VF**  
**MXZ-3F54VF2 MXZ-3F68VF2 MXZ-4F72VF2 MXZ-4F80VF2**  
**MXZ-3F54VF3 MXZ-3F68VF3 MXZ-4F72VF3 MXZ-4F80VF3**



**MXZ-4F83VF**  
**MXZ-5F102VF**  
**MXZ-2F53VFHZ**



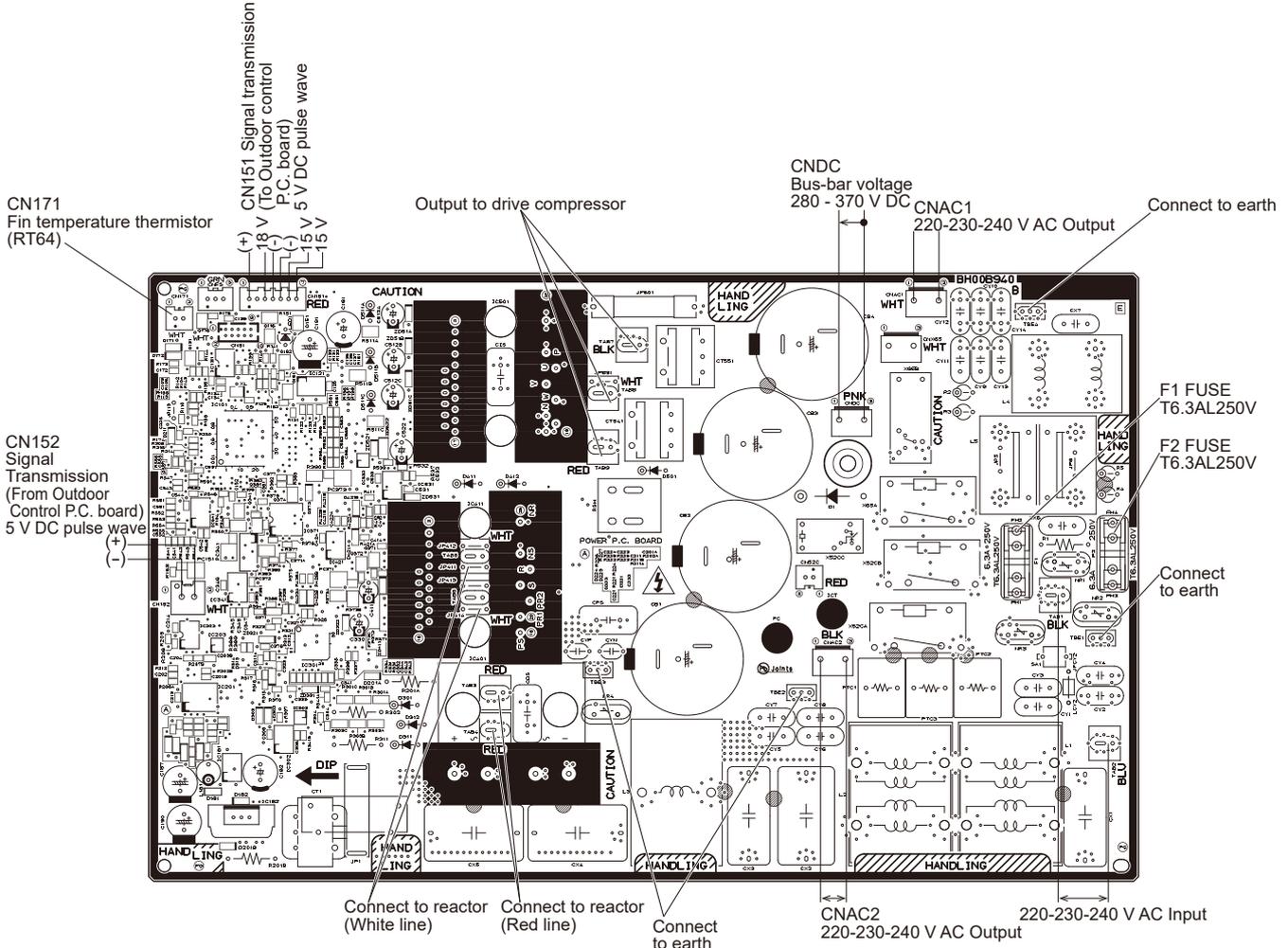
**Fin temperature thermistor (RT64)**



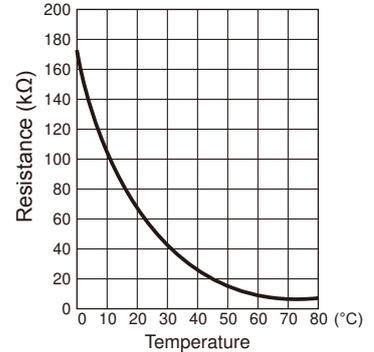
Thermistor R50 = 17 kΩ ± 2%  
 B constant = 4150 ± 3%

$$R_t = 17 \exp\left\{4150 \left( \frac{1}{273+t} - \frac{1}{323} \right)\right\}$$

**MXZ-6F122VF**  
**MXZ-4F83VFHZ**



**Fin temperature thermistor (RT64)**



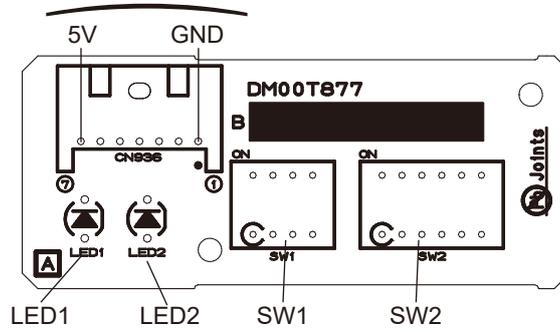
Thermistor R50 = 17 kΩ ± 2%  
B constant = 4150 ± 3%

$$R_t = 17 \exp\left\{4150 \left( \frac{1}{273+t} - \frac{1}{323} \right)\right\}$$

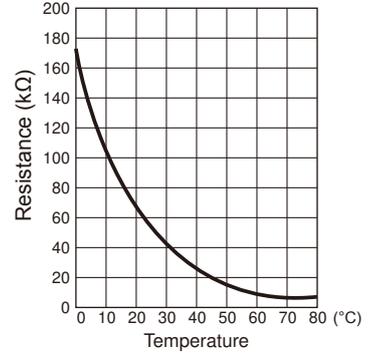
4. Outdoor display P.C. board

MXZ-2F33VF    MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH  
 MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2  
 MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3

To inverter P.C. board (CN936)



Fin temperature thermistor (RT64)



Thermistor R50 = 17 kΩ ± 2%  
 B constant = 4150 ± 3%

$$R_t = 17 \exp\left\{4150 \left( \frac{1}{273+t} - \frac{1}{323} \right)\right\}$$

## &lt;Detaching method of the terminal with locking mechanism&gt;

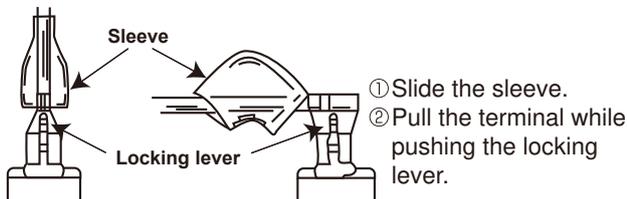
The terminal which has the locking mechanism can be detached as shown below.

There are following 2 types of the terminal with locking mechanism.

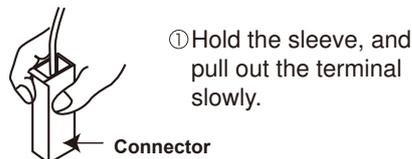
The terminal without locking mechanism can be detached by pulling it out.

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. MXZ-2F33VF    MXZ-2F42VF    MXZ-2F53VF    MXZ-2F53VFH**  
**MXZ-2F33VF2    MXZ-2F42VF2    MXZ-2F53VF2    MXZ-2F53VFH2**  
**MXZ-2F33VF3    MXZ-2F42VF3    MXZ-2F53VF3    MXZ-2F53VFH3**

**NOTE:** Turn OFF the power supply before disassembly.

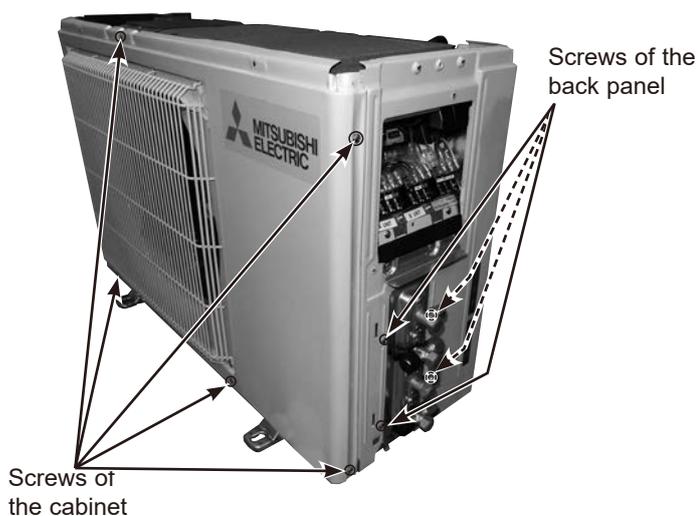
—>: Indicates the visible parts in the photos.  
 --->: Indicates the invisible parts in the photos.

## OPERATING PROCEDURE

**1. Removing the cabinet and the panels**

- (1) Remove the screws fixing the service panel.
- (2) Pull down the service panel and remove it.
- (3) Disconnect the power supply and indoor/outdoor connecting wire.
- (4) Remove the screws fixing the top panel.
- (5) Remove the top panel.
- (6) Remove the screws fixing the cabinet.
- (7) Remove the cabinet.
- (8) Remove the screws fixing the back panel.
- (9) Remove the back panel.

Photo 2



## PHOTOS

Photo 1

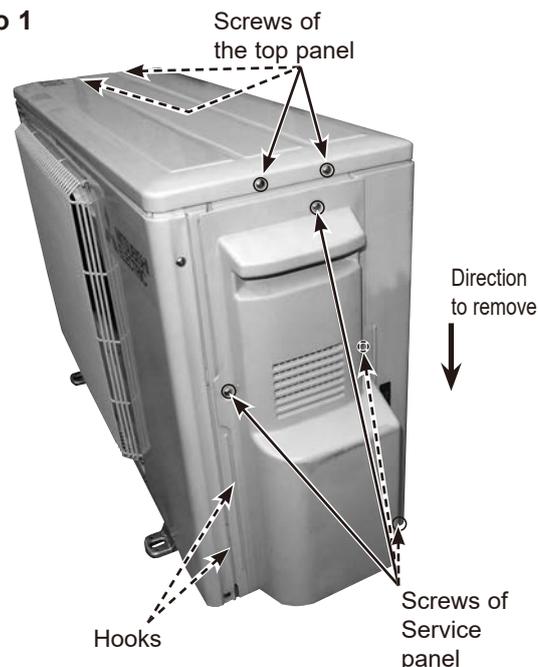
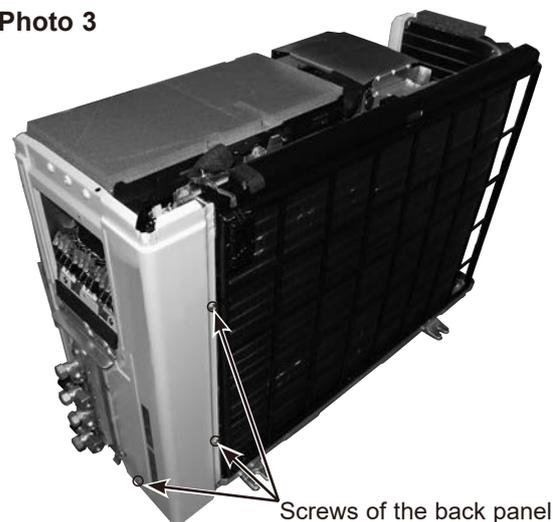


Photo 3



## OPERATING PROCEDURE

### 2. Removing the inverter assembly and the inverter P.C. board

- (1) Remove the service panel, the top panel and the cabinet (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to section 1).
- (3) Disconnect all connectors and lead wires on the inverter P.C. board.
- (4) Remove the compressor connector (CNMC).
- (5) Remove the screws fixing the heat sink support and the separator.
- (6) Remove the screws of the terminal block support and the back panel. (Photo 2)
- (7) Remove the inverter assembly.
- (8) Remove the screw of the earth wire and screws of the terminal block support.
- (9) Remove the hooks of the heat sink support and remove the heat sink support from the P.C. board support.
- (10) Remove the screw fixing the inverter P.C. board and remove the inverter P.C. board from the P.C. board support.

### 3. Removing the R.V. coil

- (1) Remove the service panel, the top panel and the cabinet (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to section 1).
- (3) Remove the inverter assembly (Refer to section 2).
- (4) Remove the R.V. coil.

### 4. Removing the discharge temperature thermistor, defrost thermistor and outdoor heat exchanger temperature thermistor

- (1) Remove the service panel, the top panel and the cabinet (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to section 1).
- (3) Remove the inverter assembly (Refer to section 2).
- (4) Pull out the discharge temperature thermistor from its holder.
- (5) Pull out the defrost thermistor from its holder (Photo 7).
- (6) Pull out the outdoor heat exchanger temperature thermistor from its holder (Photo 7).

## PHOTOS

Photo 4

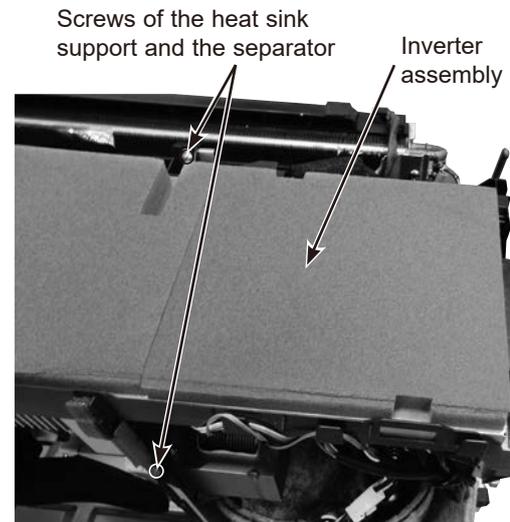


Photo 5

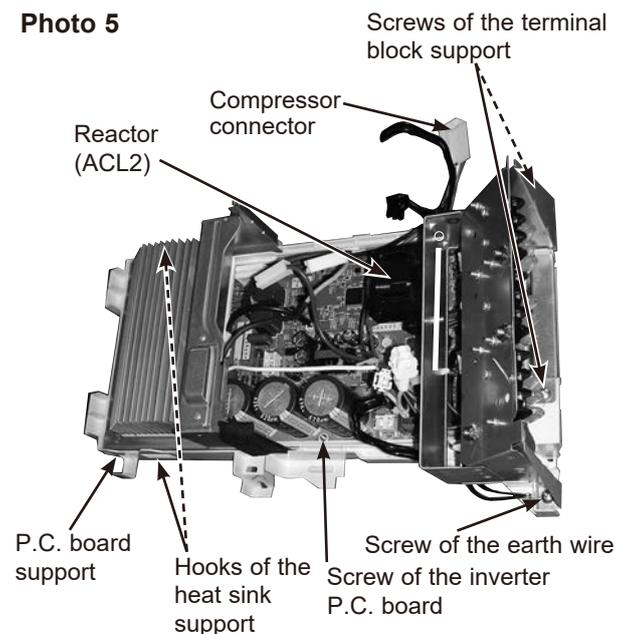
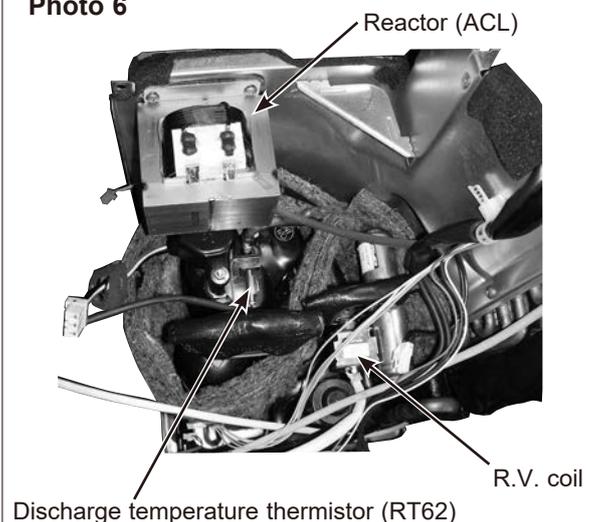


Photo 6



## OPERATING PROCEDURE

### 5. Removing the outdoor fan motor

- (1) Remove the service panel, the top panel and the cabinet (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connectors for outdoor fan motor.
- (4) Remove the propeller fan nut.
- (5) Remove the propeller fan.
- (6) Remove the screws fixing the fan motor.
- (7) Remove the fan motor.

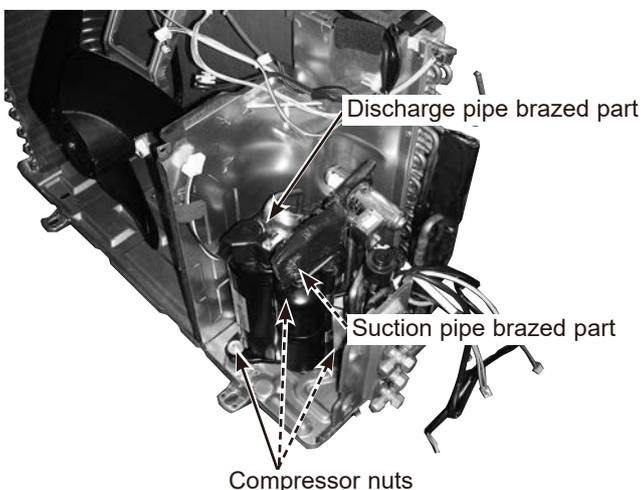
### 6. Removing the compressor and the 4-way valve

- (1) Remove the service panel, the top panel and the cabinet (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire and remove the back panel (Refer to section 1).
- (3) Remove the inverter assembly (Refer to section 2).
- (4) Recover gas from the refrigerant circuit.

**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).

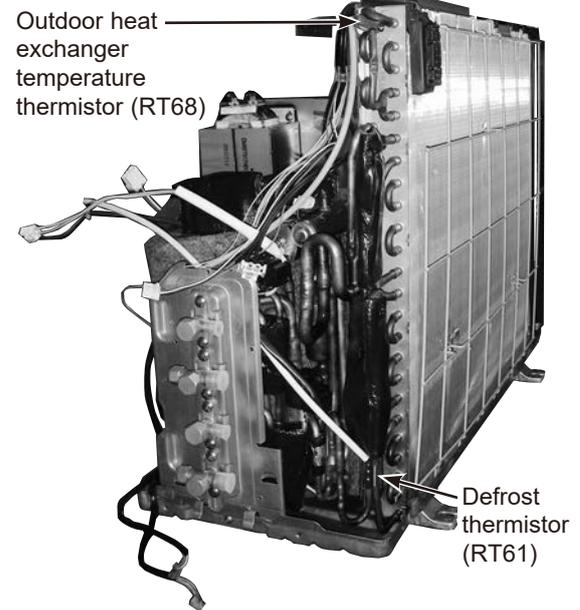
- (5) Detach the brazed part of the suction and the discharge pipe connected with compressor.
- (6) Remove the nuts of compressor legs.
- (7) Remove the compressor.
- (8) Detach the brazed part of pipes connected with 4-way valve.

**Photo 10**

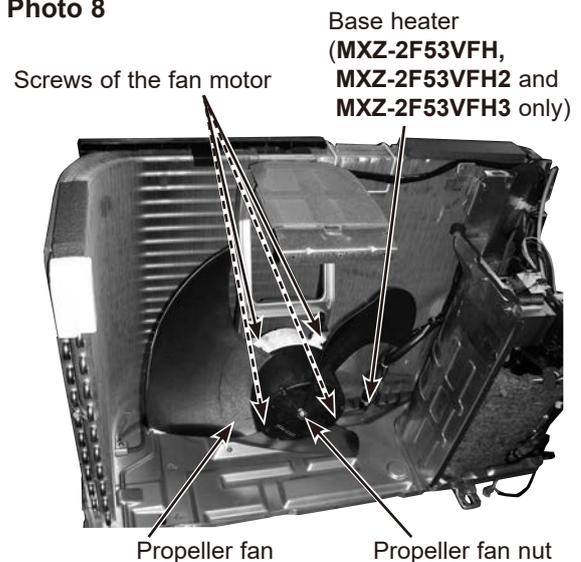


## PHOTOS

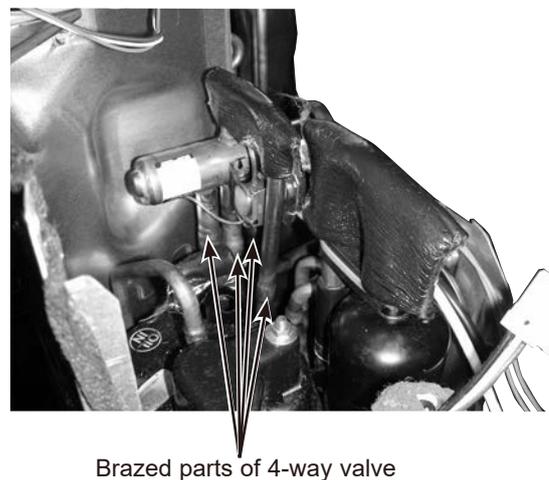
**Photo 7**



**Photo 8**

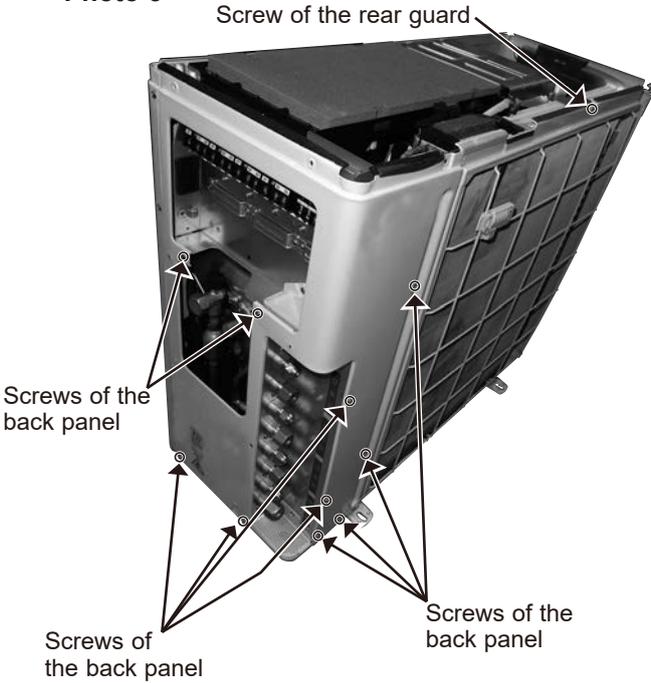
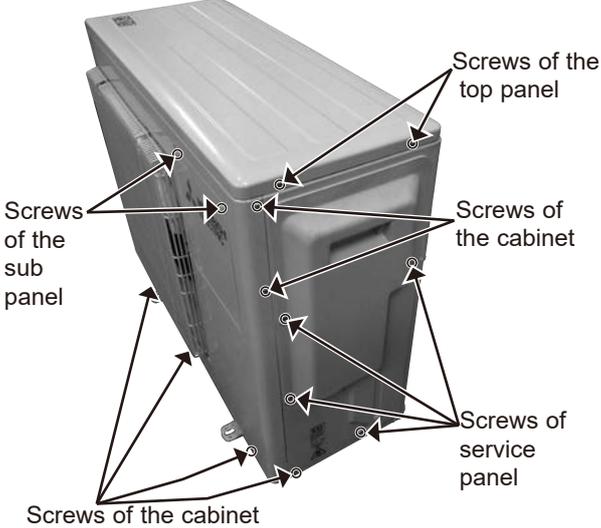
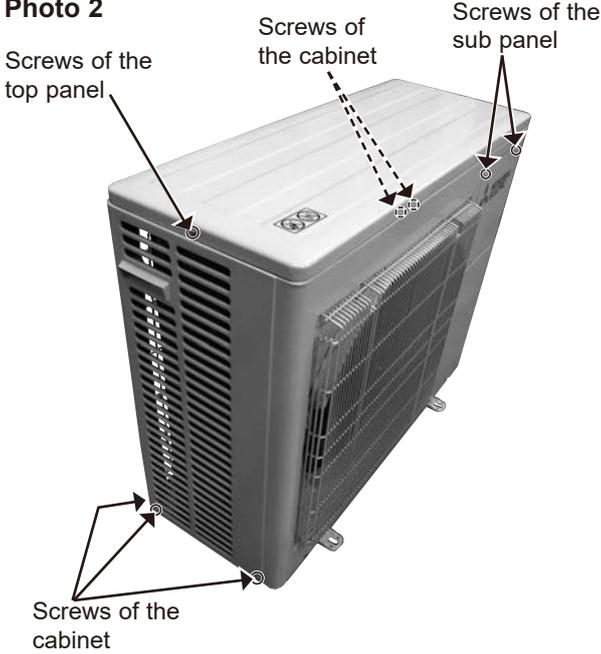


**Photo 9**



**13-2. MXZ-3F54VF MXZ-3F68VF MXZ-4F72VF  
 MXZ-3F54VF2 MXZ-3F68VF2 MXZ-4F72VF2 MXZ-4F80VF2  
 MXZ-3F54VF3 MXZ-3F68VF3 MXZ-4F72VF3 MXZ-4F80VF3**

**NOTE:** Turn OFF the power supply before disassembly.

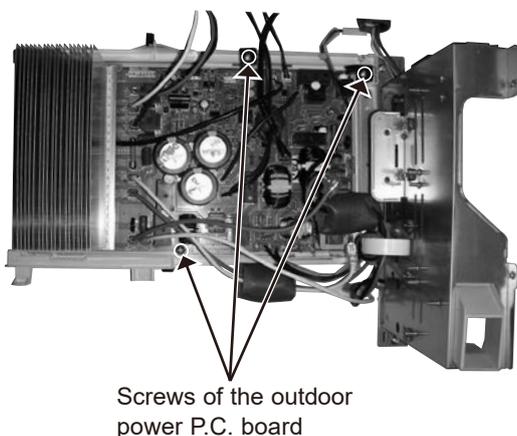
OPERATING PROCEDURE	PHOTOS
<p><b>1. Removing the cabinet and the panels</b></p> <p>(1) Remove the screws of the service panel, and remove the service panel.</p> <p>(2) Disconnect the power supply and indoor/outdoor connecting wire.</p> <p>(3) Remove the screws of the top panel, and remove the top panel.</p> <p>(4) Remove the screws of the cabinet, and remove the cabinet.</p> <p>(5) Remove the screws of the back panel, and remove the back panel (Photo 3).</p> <p><b>Photo 3</b></p> 	<p><b>Photo 1</b></p>  <p><b>Photo 2</b></p> 

## OPERATING PROCEDURE

### 2. Removing the outdoor control P.C. board, the outdoor power P.C. board and the reactor

- (1) Remove the service panel (Photo 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Remove the top panel, the cabinet, and the back panel (Photo 1, 2, 3).
- (4) Disconnect all connectors and lead wires on the outdoor control P.C. board.
- (5) Unhook the catches of the outdoor control P.C. board, and remove the outdoor control P.C. board.
- (6) Remove the screws of the electrical box assembly, unhook the catches of the electrical box assembly, and remove the electrical box assembly.
- (7) Remove the screws of outdoor control P.C. board holder, and remove the outdoor control P.C. board holder.
- (8) Remove the screws of the reactor, and remove the reactor.
- (9) Remove the screws of the reactor bed, and remove the reactor bed.
- (10) Remove the screws of the heat sink support, and remove the heat sink support.
- (11) Remove the screws fixing the outdoor power P.C. board.
- (12) Disconnect all connectors and lead wires on the outdoor power P.C. board.

Photo 7



## PHOTOS

Photo 4

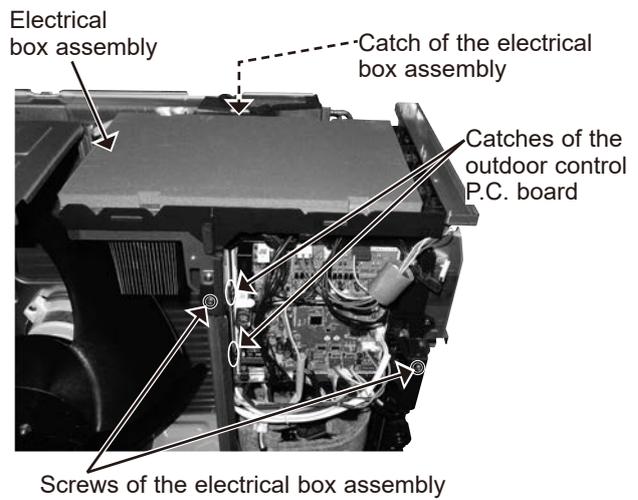


Photo 5

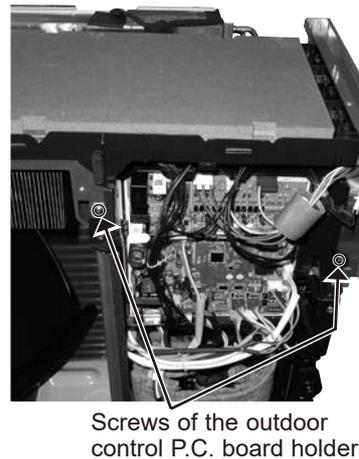
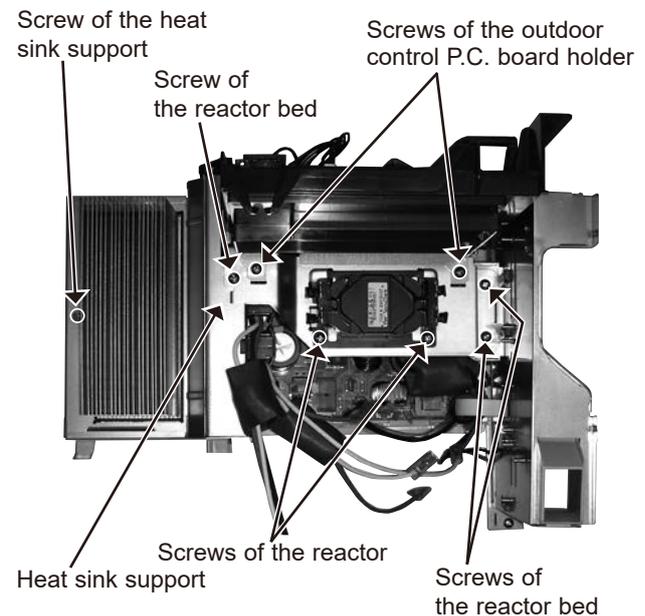


Photo 6



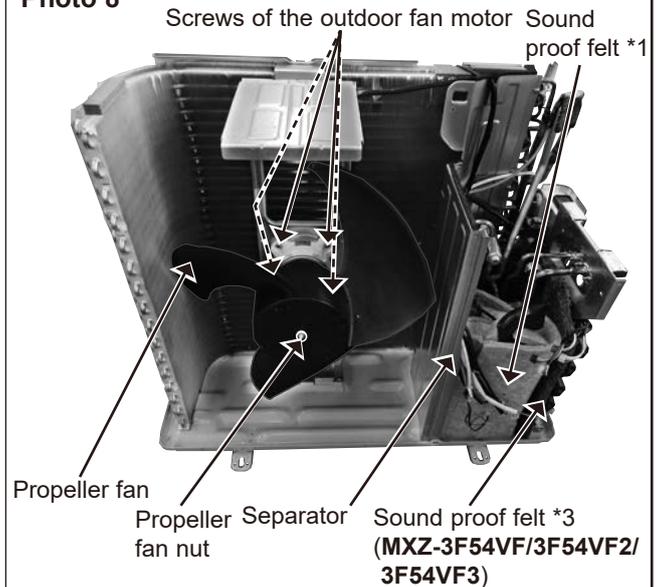
## OPERATING PROCEDURE

### 3. Removing the fan motor

- (1) Remove the service panel (Photo 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Remove the top panel, the cabinet, and the back panel (Photo 1, 2, 3).
- (4) Disconnect connectors CN712, CNF1, CNTH1, CNTH2, CN63H, CN791, CN792, CN793, CN794 (**MXZ-4F72VF/4F72VF2/4F72VF3/4F80VF2/4F80VF3**), CN797 on the outdoor control P.C. board and disconnect the relay connector of the compressor lead wire.
- (5) Remove the screws of the electrical box assembly, and remove the electrical box assembly (Photo 4).
- (6) Remove the propeller fan.
- (7) Remove the fan motor.

## PHOTOS

Photo 8



### 4. Removing the compressor and the 4-way valve

- (1) Remove the service panel (Photo 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Remove the top panel, the cabinet, and the back panel (Photo 1, 2, 3).
- (4) Recover gas from the refrigerant circuit.  
**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).
- (5) Disconnect the outdoor control P.C. board connectors: CN712, CNF1, CNTH1, CNTH2, CN63H, CN791, CN792, CN793, CN794 (**MXZ-4F72VF/4F72VF2/4F72VF3/4F80VF2/4F80VF3**), CN797.
- (6) Disconnect the compressor lead wire from the terminal of the compressor (U, V, W).
- (7) Remove the screws of the electrical box assembly, and remove the electrical box assembly (Photo 4).
- (8) Remove the propeller fan.
- (9) Remove the sound proof felt \*1, \*2 and \*3 (**MXZ-3F54VF/3F54VF2/3F54VF3**).  
**NOTE:** Before removing the sound proof felt, remove the hook-and-loop fastener of the top felt by the power receiver.
- (10) Remove the screws of the separator, and remove the separator.
- (11) Detach the brazed parts of the compressor suction and discharge pipes.
- (12) Remove the compressor nuts and remove the compressor.
- (13) Detach the brazed parts of the 4-way valve and pipe.

Photo 9

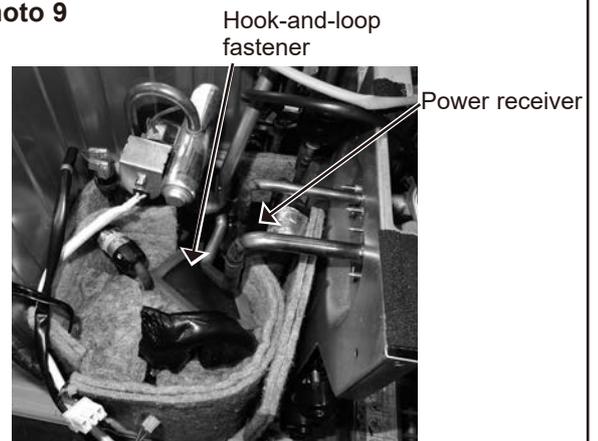
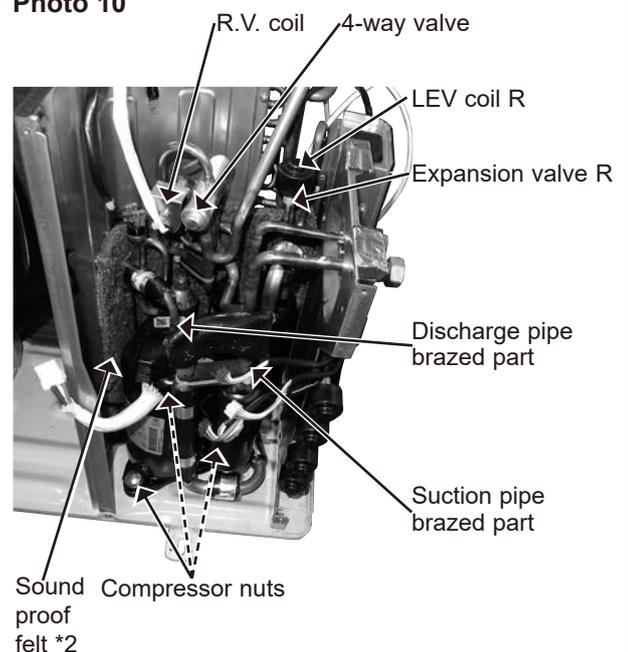


Photo 10



## OPERATING PROCEDURE

### 5. Removing the expansion valve

- (1) Remove the service panel (Photo 1).
- (2) Remove the top panel, the cabinet, and the back panel (Photo 1, 2, 3).  
(Gas recovery is not required if the unit is pumped down.)
- (3) Remove the electrical parts for removing LEV R (Photo 4, 8).
- (4) Remove the LEV coils.
- (5) Detach the brazed parts of expansion valves and pipes.

## PHOTOS

Photo 11

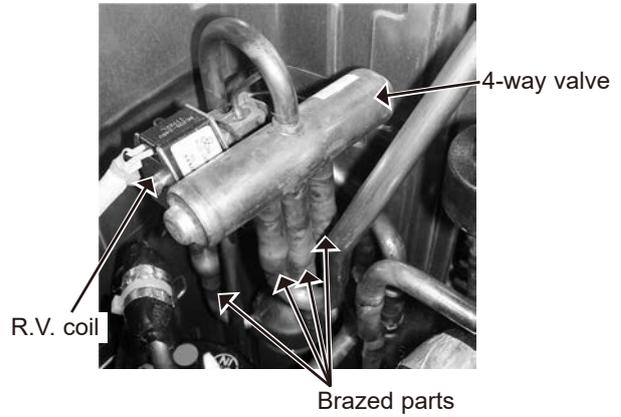
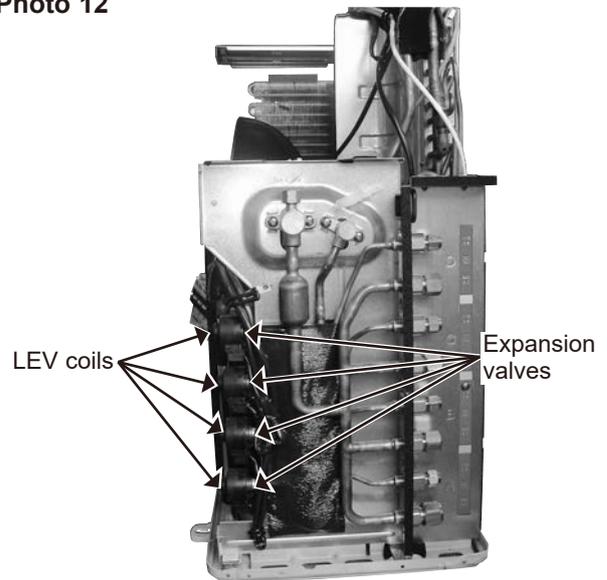
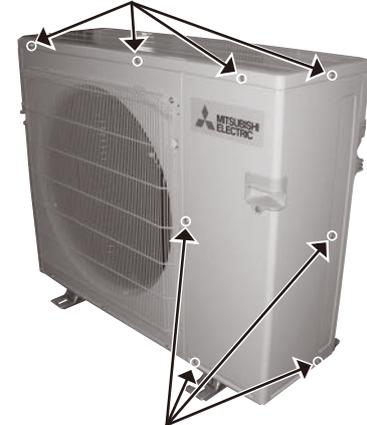
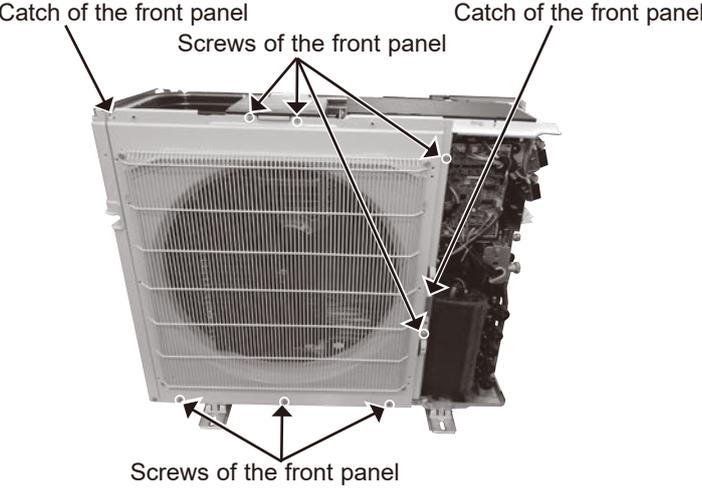
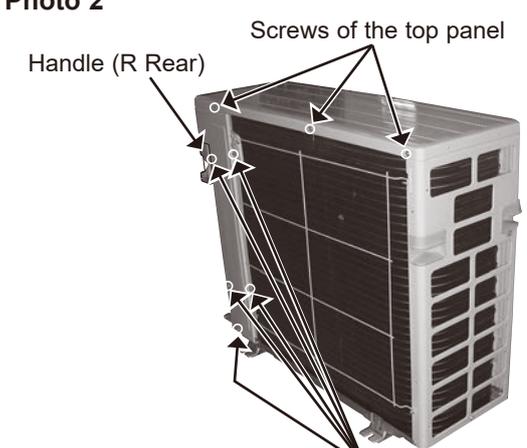
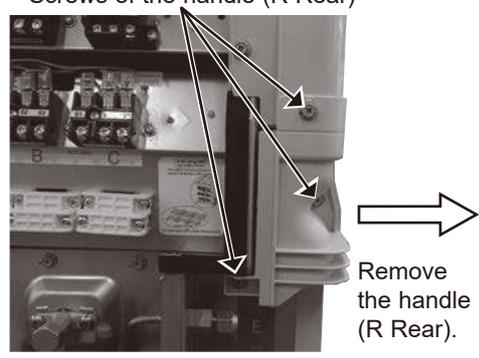
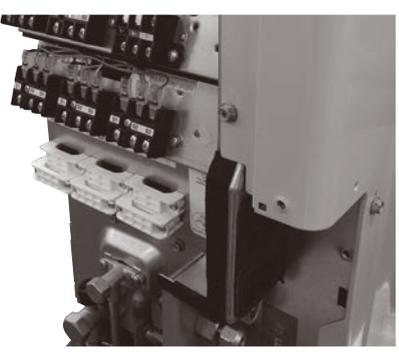


Photo 12



**13-3. MXZ-4F83VF MXZ-5F102VF**

**NOTE:** Turn OFF the power supply before disassembly.

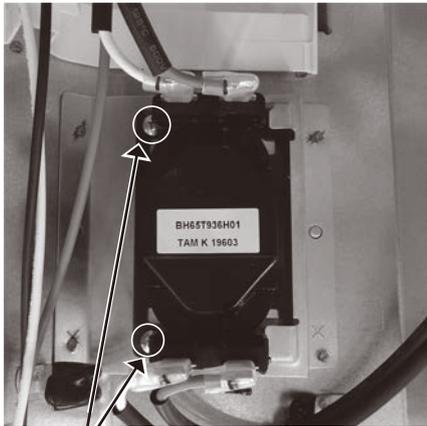
OPERATING PROCEDURE	PHOTOS
<p><b>1. Removing the panels</b></p> <ol style="list-style-type: none"> <li>(1) Remove the screws fixing the service panel, and remove the service panel.</li> <li>(2) Remove the screws fixing the top panel and remove the top panel.</li> <li>(3) Remove the screws fixing the handle (R Rear), and remove the handle (R Rear).</li> <li>(4) Disconnect the power supply and indoor/outdoor connecting wire.</li> <li>(5) Remove the screws fixing the front panel, and remove the front panel.</li> <li>(6) Remove the screws fixing the back panel, and remove the back panel.</li> </ol>	<p><b>Photo 1</b></p>  <p>Screws of the top panel</p> <p>Screws of the service panel</p>
<p><b>Photo 3</b></p>  <p>Catch of the front panel</p> <p>Screws of the front panel</p> <p>Screws of the front panel</p>	<p><b>Photo 2</b></p>  <p>Screws of the top panel</p> <p>Handle (R Rear)</p> <p>Screws of the back panel</p>
<p><b>Photo 4-1</b></p>  <p>Screws of the handle (R Rear)</p> <p>Remove the handle (R Rear).</p>	<p><b>Photo 4-2</b></p> 

## OPERATING PROCEDURE

### 2. Removing the outdoor control P.C. board, the reactor and the outdoor power P.C. board

- (1) Remove the service panel and the top panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connectors on the outdoor control P.C. board.
- (4) Remove the screws fixing the outdoor control P.C. board holder, and remove the outdoor control P.C. board.
- (5) Disconnect the lead wire from the reactor.
- (6) Remove the screws fixing the reactor, and remove the reactor.
- (7) Disconnect the lead wire of the power P.C. board.
- (8) Disconnect the catches of the PB cover, and remove the PB cover.
- (9) Remove the outdoor power P.C. board.

Photo 7



Screws of the reactor

## PHOTOS

Photo 5

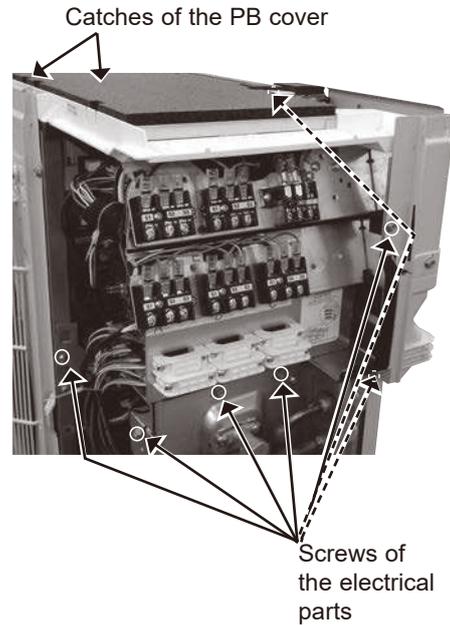
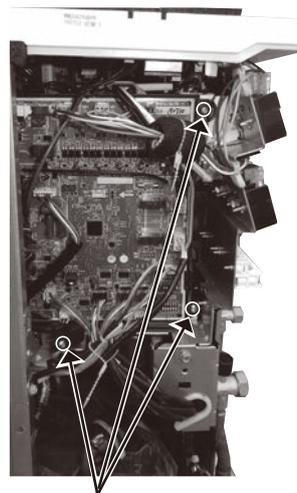


Photo 6



Screws of the outdoor control P.C. board holder

## OPERATING PROCEDURE

### 3. Removing the fan motor

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connector CNF1 on the outdoor control P.C. board.
- (4) Remove the propeller fan.
- (5) Remove the fan motor.

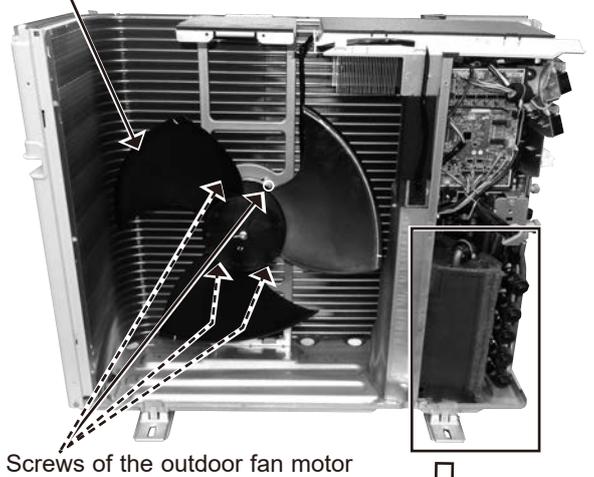
### 4. Removing the expansion valve

- (1) Remove the service panel and the top panel (Refer to 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.  
(Gas recovery is not required if the unit is pumped down.)
- (3) Remove the LEV coils.
- (4) Detach the brazed parts of the expansion valves and pipes.

## PHOTOS

Photo 8

Propeller fan



Screws of the outdoor fan motor

Photo 9



Soundproof felt

Expansion valves

LEV coils

## OPERATING PROCEDURE

### 5. Removing the compressor and 4-way valve

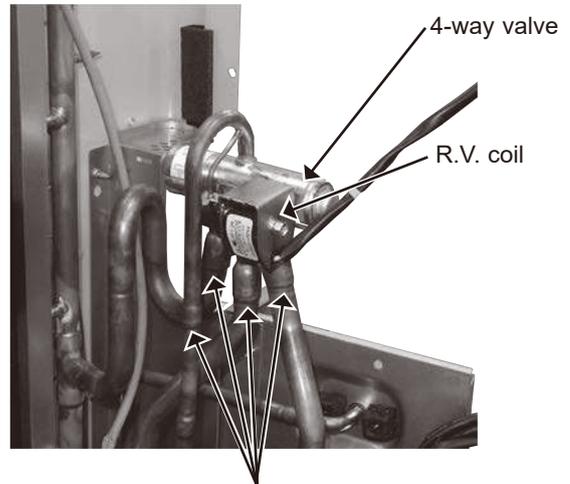
- (1) Remove the service panel, the top panel, the handle (R Rear), the back panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire, and remove the back panel.
- (3) Recover gas from the refrigerant circuit.

**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).

- (4) Disconnect the compressor lead wire from the terminal of the compressor (U, V, W).
- (5) Disconnect the outdoor control P.C. board connectors: CNF1, CNTH1, CNTH2, CN63H, CN712, CN791, CN792, CN793, CN794, CN795 (**MXZ-5F**)
- (6) Remove the screws fixing the electrical parts, and remove the electrical parts (Photo 5).
- (7) Remove the propeller fan.
- (8) Remove the screws fixing the separator, and remove the separator.
- (9) Remove the soundproof felt.
- (10) Detach the brazed parts of the compressor suction pipe and discharge pipe.
- (11) Remove the compressor nuts and remove the compressor.
- (12) Detach the brazed parts of 4-way valve and pipes.

## PHOTOS

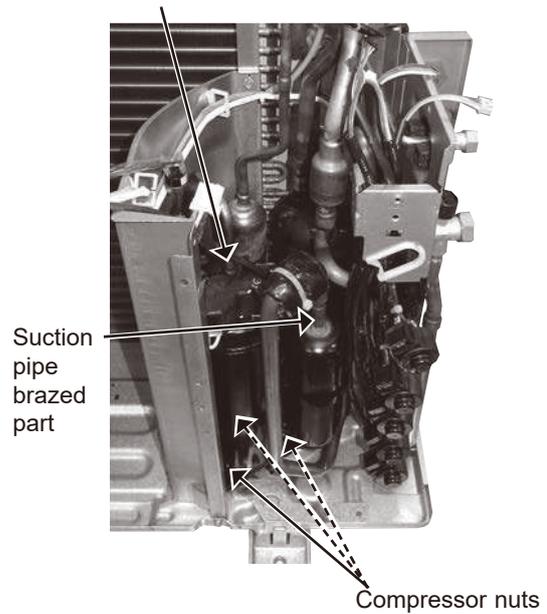
Photo 10



Brazed parts of 4-way valve and pipes

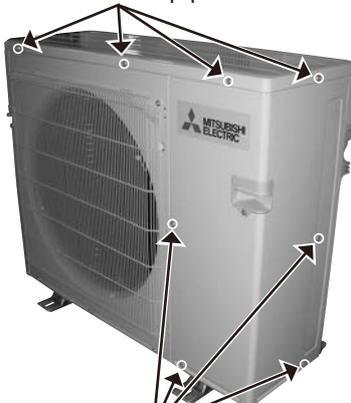
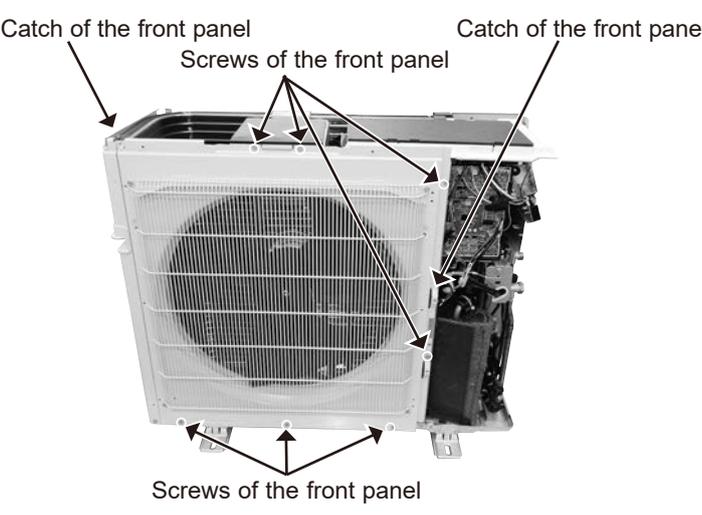
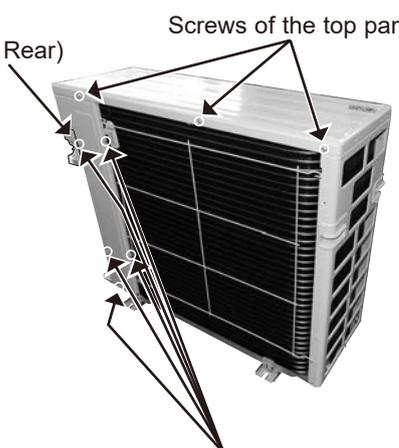
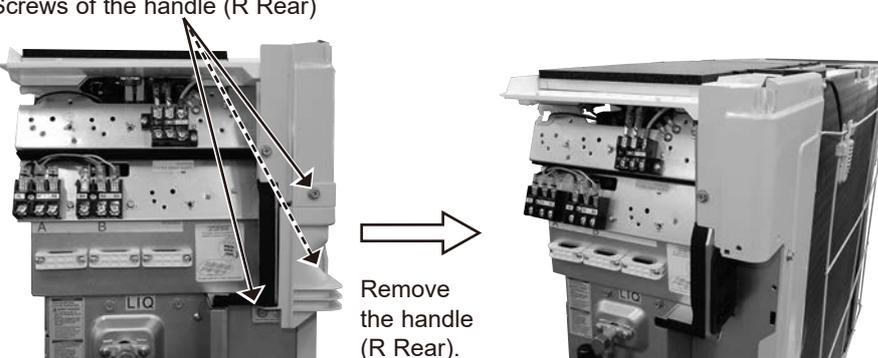
Photo 11

Discharge pipe brazed part



## 13-4. MXZ-2F53VFHZ

**NOTE:** Turn OFF the power supply before disassembly.

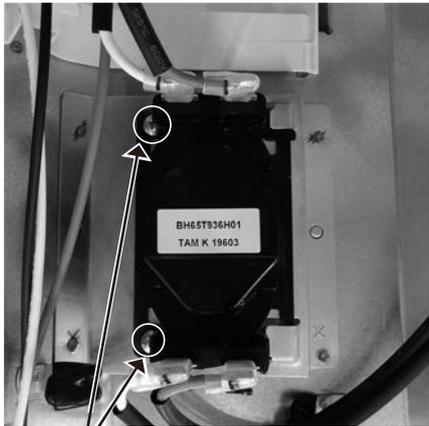
OPERATING PROCEDURE	PHOTOS
<p><b>1. Removing the panels</b></p> <ol style="list-style-type: none"> <li>(1) Remove the screws fixing the service panel, and remove the service panel.</li> <li>(2) Remove the screws fixing the top panel and remove the top panel.</li> <li>(3) Remove the screws fixing the handle (R Rear), and remove the handle (R Rear).</li> <li>(4) Disconnect the power supply and indoor/outdoor connecting wire.</li> <li>(5) Remove the screws fixing the front panel, and remove the front panel.</li> <li>(6) Remove the screws fixing the back panel, and remove the back panel.</li> </ol>	<p><b>Photo 1</b></p> <p>Screws of the top panel</p>  <p>Screws of the service panel</p>
<p><b>Photo 3</b></p> <p>Catch of the front panel</p> <p>Screws of the front panel</p>  <p>Screws of the front panel</p>	<p><b>Photo 2</b></p> <p>Handle (R Rear)</p> <p>Screws of the top panel</p>  <p>Screws of the back panel</p>
<p><b>Photo 4</b></p> <p>Screws of the handle (R Rear)</p>  <p>Remove the handle (R Rear).</p>	

## OPERATING PROCEDURE

### 2. Removing the outdoor control P.C. board, the reactor and the outdoor power P.C. board

- (1) Remove the service panel and the top panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connectors on the outdoor control P.C. board.
- (4) Remove the screws fixing the outdoor control P.C. board holder, and remove the outdoor control P.C. board.
- (5) Disconnect the lead wire from the reactor.
- (6) Remove the screws fixing the reactor, and remove the reactor.
- (7) Disconnect the lead wire of the power P.C. board.
- (8) Disconnect the catches of the PB cover, and remove the PB cover.
- (9) Remove the outdoor power P.C. board.

Photo 7

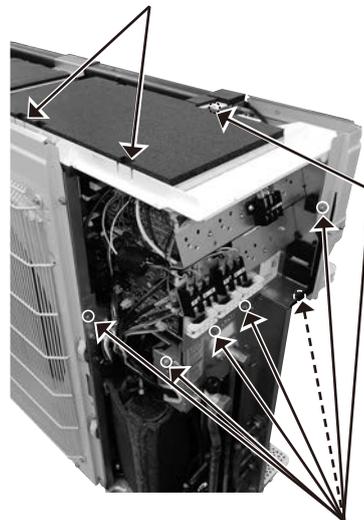


Screws of the reactor

## PHOTOS

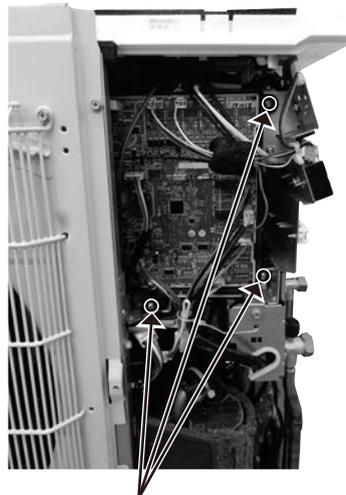
Photo 5

Catches of the PB cover



Screws of the electrical parts

Photo 6



Screws of the outdoor control P.C. board holder

## OPERATING PROCEDURE

### 3. Removing the fan motor

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connector CNF1 on the outdoor control P.C. board.
- (4) Remove the propeller fan.
- (5) Remove the fan motor.

### 4. Removing the expansion valve

- (1) Remove the service panel and the top panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.  
(Gas recovery is not required if the unit is pumped down.)
- (3) Remove the LEV coils.
- (4) Detach the brazed parts of the expansion valves and pipes.

### 5. Removing the defrost heater

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the defrost heater lead wires from CN714 on the outdoor control P.C. board.
- (4) Remove the defrost heater lead wires from the lead clamp.
- (5) Remove the screws of the defrost heater.
- (6) Remove the heater protector and the defrost heater.

## PHOTOS

Photo 8

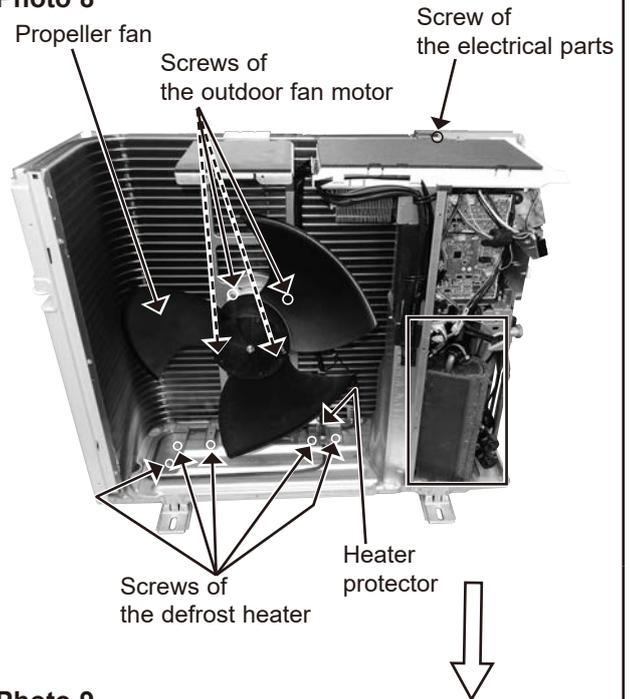
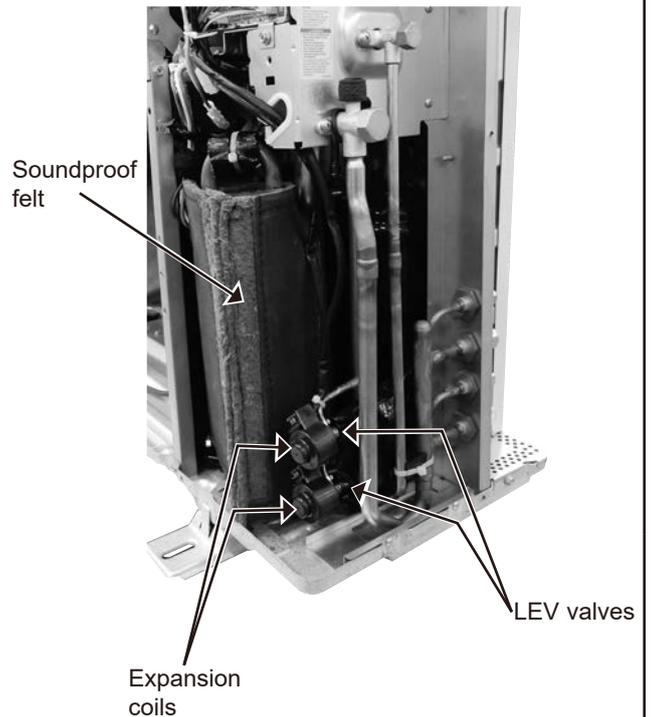


Photo 9



## OPERATING PROCEDURE

### 6. Removing the compressor and 4-way valve

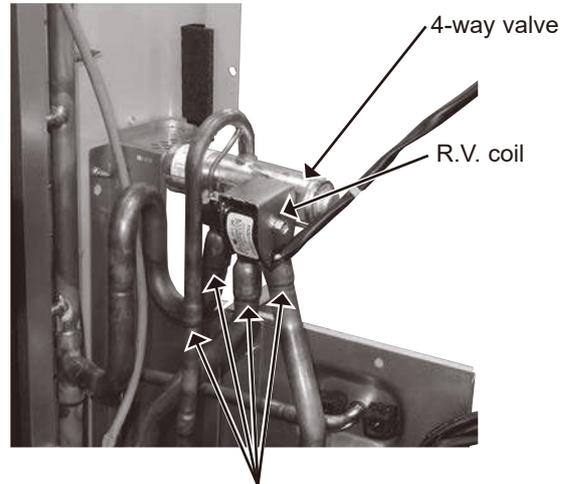
- (1) Remove the service panel, the top panel, the handle (Rear), the back panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire, and remove the back panel.
- (3) Recover gas from the refrigerant circuit.

**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).

- (4) Disconnect the compressor lead wire from the terminal of the compressor (U, V, W).
- (5) Disconnect the outdoor control P.C. board connectors: CNF1, CNTH1, CNTH2, CN63H, CN712, CN791, CN792, CN714
- (6) Remove the screws fixing the electrical parts, and remove the electrical parts (Photo 5).
- (7) Remove the propeller fan.
- (8) Remove the screws fixing the separator, and remove the separator.
- (9) Remove the soundproof felt.
- (10) Detach the brazed parts of the compressor suction pipe and discharge pipe.
- (11) Remove the compressor nuts and remove the compressor.
- (12) Detach the brazed parts of 4-way valve and pipes.

## PHOTOS

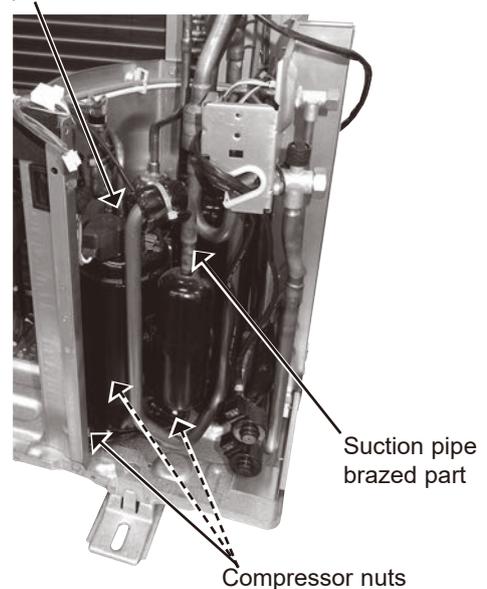
Photo 10



Brazed parts of 4-way valve and pipes

Photo 11

Discharge pipe brazed part



## 13-5. MXZ-4F83VFHZ

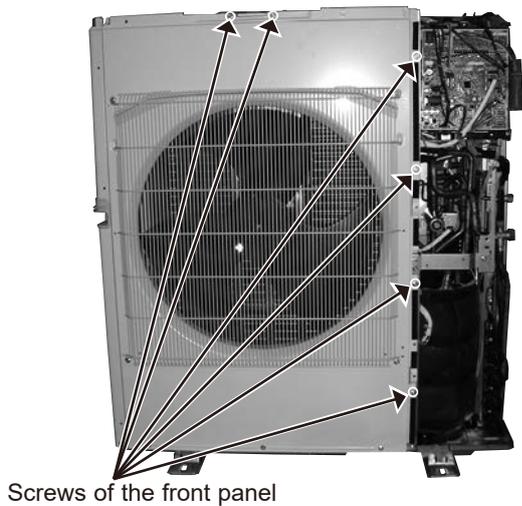
**NOTE:** Turn OFF the power supply before disassembly.

### OPERATING PROCEDURE

#### 1. Removing the panels

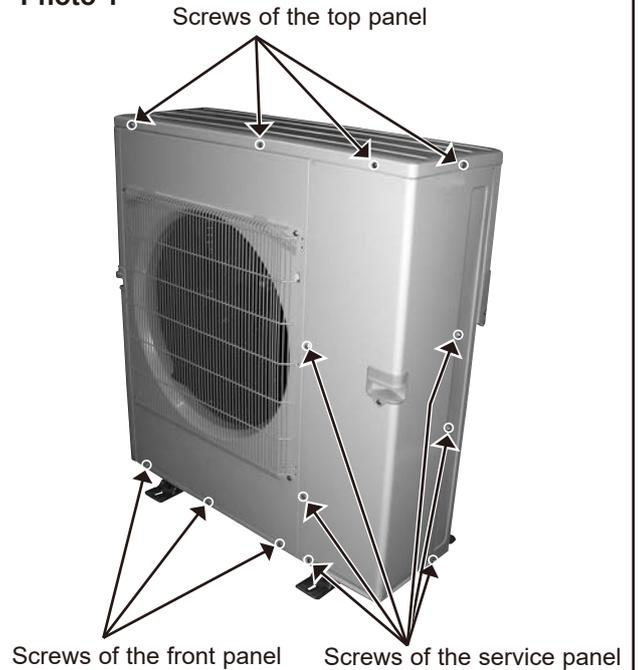
- (1) Remove the screws fixing the service panel, and remove the service panel.
- (2) Remove the screws fixing the top panel, remove the top panel.
- (3) Disconnect the power supply and indoor/outdoor connecting wire.
- (4) Remove the screws fixing the front panel, and remove the front panel.
- (5) Remove the screws fixing the back panel, and remove the back panel.

**Photo 3**

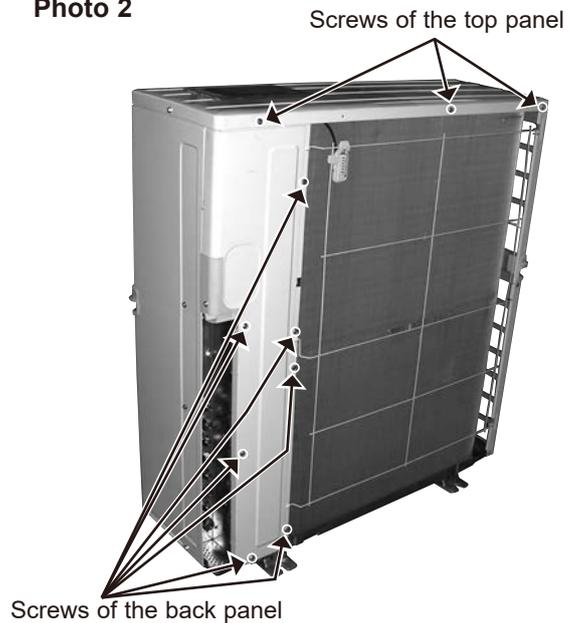


### PHOTOS

**Photo 1**



**Photo 2**

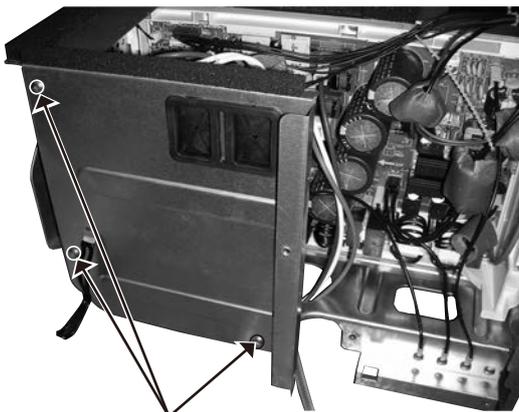


## OPERATING PROCEDURE

### 2. Removing the outdoor control P.C. board, the reactor and the outdoor power P.C. board

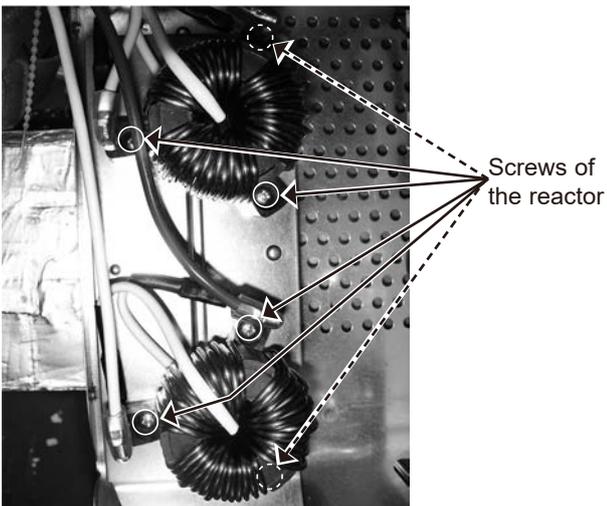
- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connectors on the outdoor control P.C. board.
- (4) Remove the screws fixing the outdoor control P.C. board, and remove the outdoor control P.C. board.
- (5) Remove the screws fixing the electrical parts, and remove the electrical parts.
- (6) Remove the screws fixing the TB support, and remove the TB support.
- (7) Remove the screws fixing the control box separator, and remove the control box separator.
- (8) Disconnect the lead wire of the outdoor power P.C. board.
- (9) Remove the screws fixing the outdoor power P.C. board, and remove the outdoor power P.C. board with the outdoor P.C. board holder.
- (10) Remove the screws fixing the control box F, and remove the control box F.
- (11) Remove the screws fixing the reactors, and remove the reactors.

Photo 7



Screws of the control box F

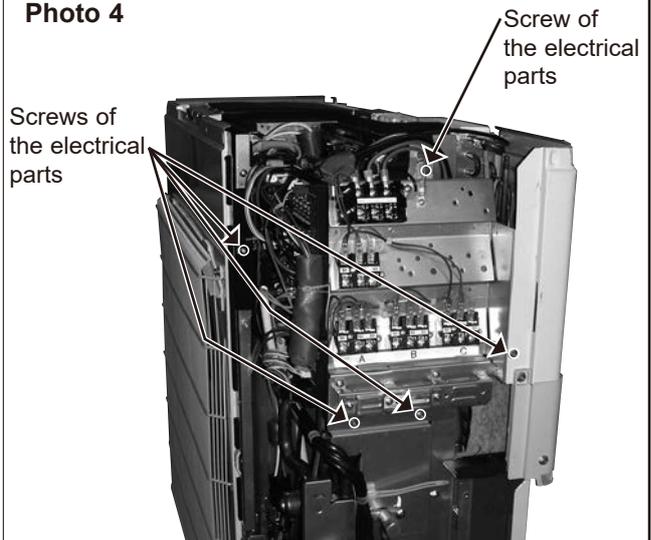
Photo 8



Screws of the reactor

## PHOTOS

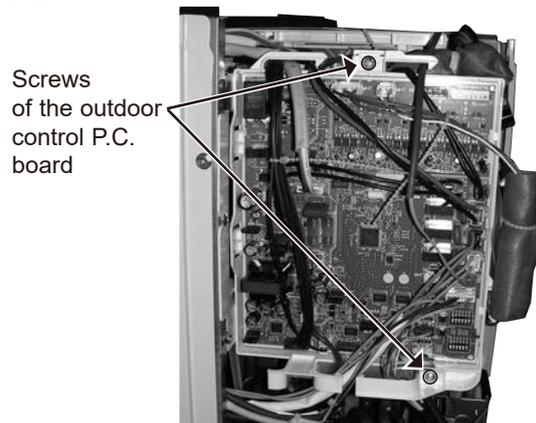
Photo 4



Screw of the electrical parts

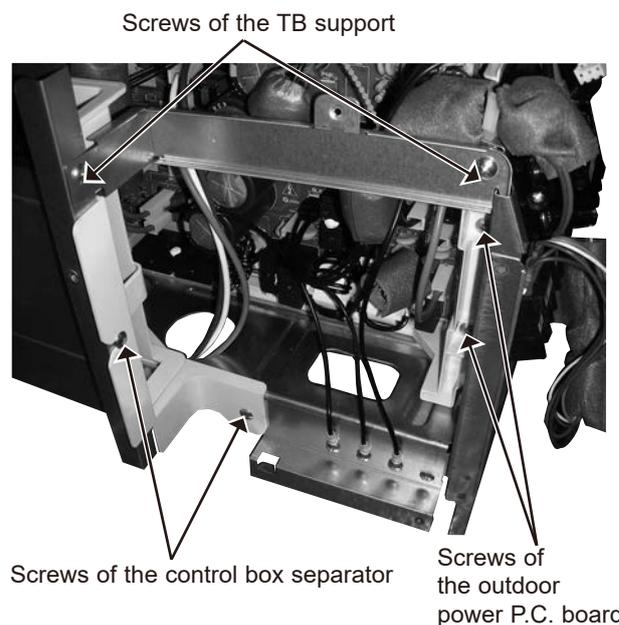
Screws of the electrical parts

Photo 5



Screws of the outdoor control P.C. board

Photo 6



Screws of the TB support

Screws of the control box separator

Screws of the outdoor power P.C. board

## OPERATING PROCEDURE

### 3. Removing the fan motor

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the connector CNF1 on the outdoor control P.C. board.
- (4) Remove the propeller fan.
- (5) Remove the fan motor.

### 4. Removing the expansion valve

- (1) Remove the service panel and the top panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.  
(Gas recovery is not required if the unit is pumped down.)
- (3) Remove the LEV coils.
- (4) Detach the brazed parts of expansion valves and pipes.

### 5. Removing the defrost heater

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire.
- (3) Disconnect the defrost heater lead wires from CN714 on the outdoor control P.C. board.
- (4) Remove the defrost heater lead wires from the lead clamp.
- (5) Remove the screws of the defrost heater.
- (6) Remove the heater protector and the defrost heater.

## PHOTOS

Photo 9

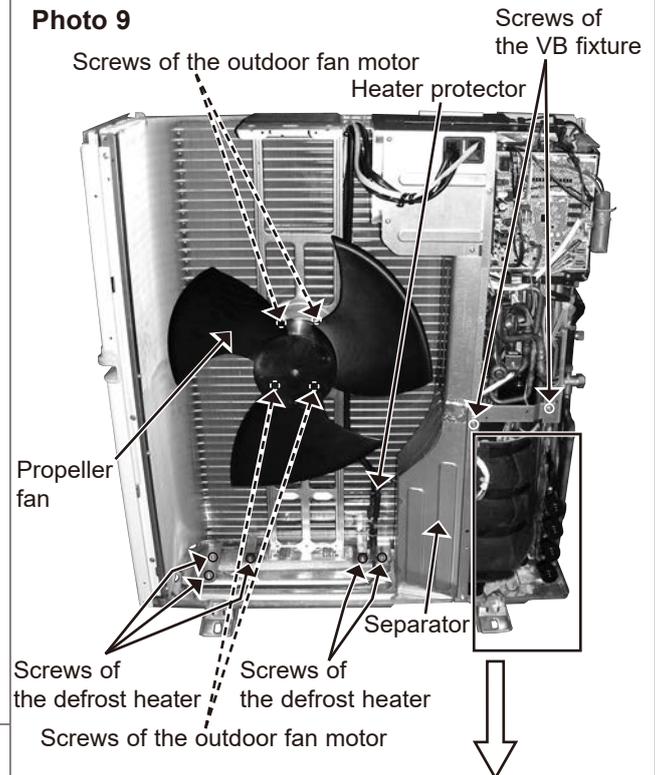
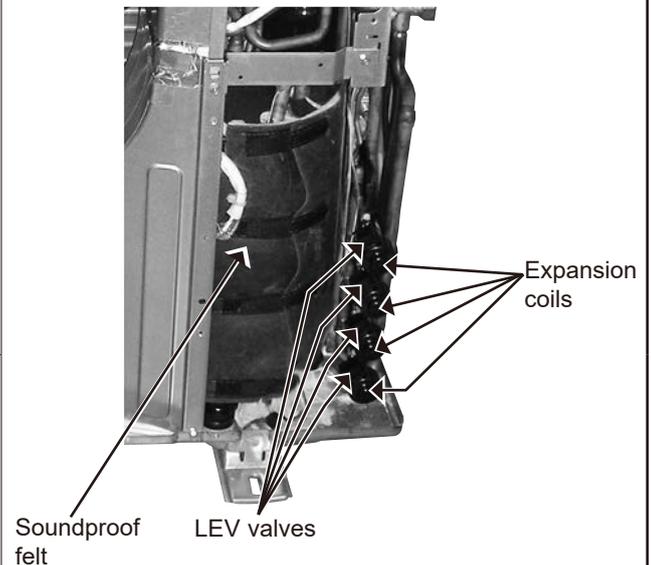


Photo 10



## OPERATING PROCEDURE

### 6. Removing the compressor and 4-way valve

- (1) Remove the service panel, the top panel, the back panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply and indoor/outdoor connecting wire, and remove the back panel.
- (3) Recover gas from the refrigerant circuit.  
**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).
- (5) Disconnect the compressor lead wire from the terminal of the compressor (U, V, W).
- (6) Disconnect the outdoor control P.C. board connectors: CNF1, CNTH1, CNTH2, CN63H, CN712, CN713, CN714, CN791, CN792, CN793, CN794
- (7) Remove the screws fixing the electrical parts, and remove the electrical parts (Photo 4).
- (8) Remove the propeller fan.
- (9) Remove the screws fixing the VB fixture, and remove the VB fixture.
- (10) Remove the screws fixing the separator, and remove the separator.  
**NOTE:** When installing the separator, insert the tabs of the heat exchanger into the separator.
- (11) Remove the soundproof felt.
- (12) Detach the brazed parts of the suction pipe and discharge pipe.
- (13) Remove the nuts of the compressor, and remove the compressor.
- (14) Detach the brazed parts of 4-way valve and pipes.

## PHOTOS

Photo 11

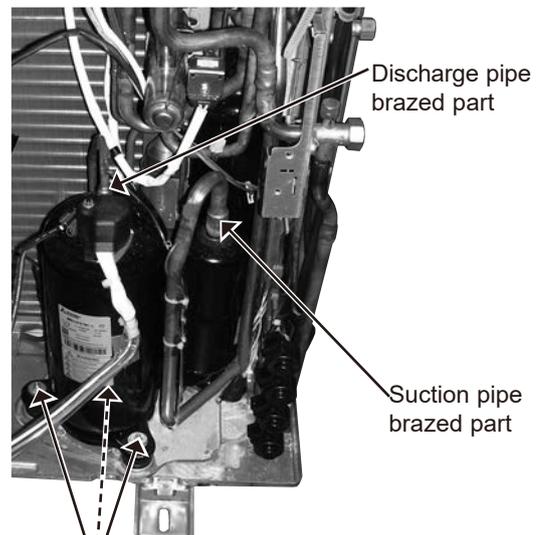


4-way valve

R.V. coil

Brazed parts of 4-way valve and pipes

Photo 12



Discharge pipe brazed part

Suction pipe brazed part

Compressor nuts

## 13-6. MXZ-6F122VF

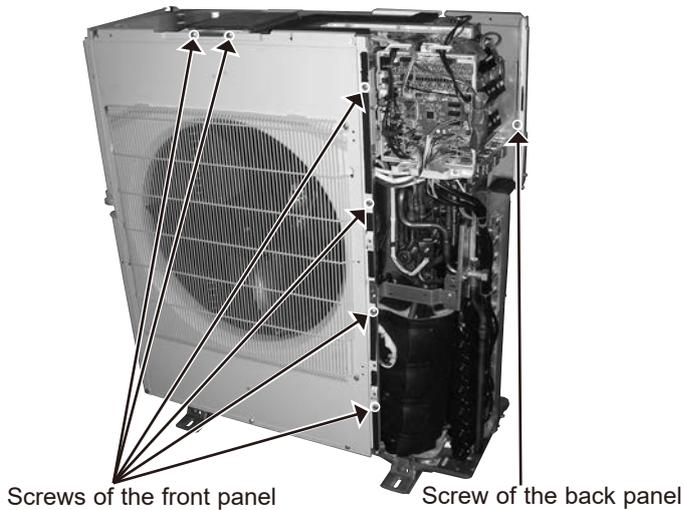
**NOTE:** Turn OFF the power supply before disassembly.

### OPERATING PROCEDURE

#### 1. Removing the panels

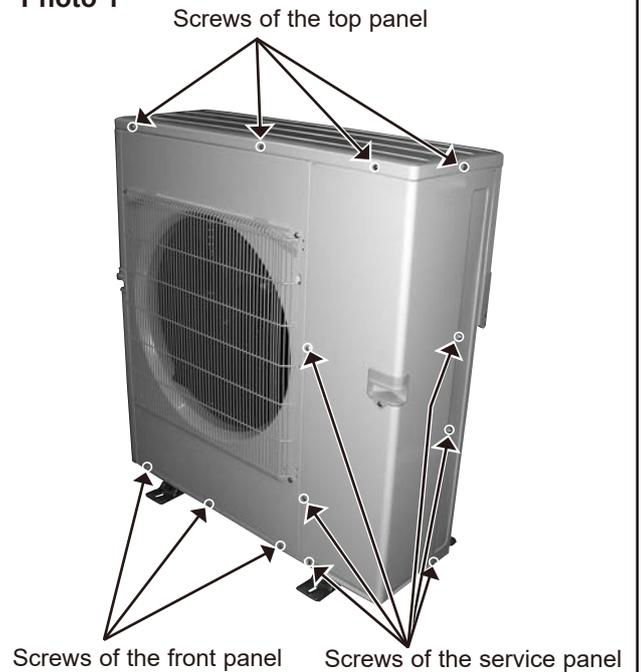
- (1) Remove the screws fixing the service panel, and remove the service panel.
- (2) Remove the screws fixing the top panel, remove the top panel.
- (3) Disconnect the power supply cord and indoor/outdoor connecting wire.
- (4) Remove the screws fixing the front panel, and remove the front panel.
- (5) Remove the screws fixing the back panel, and remove the back panel.

**Photo 3**

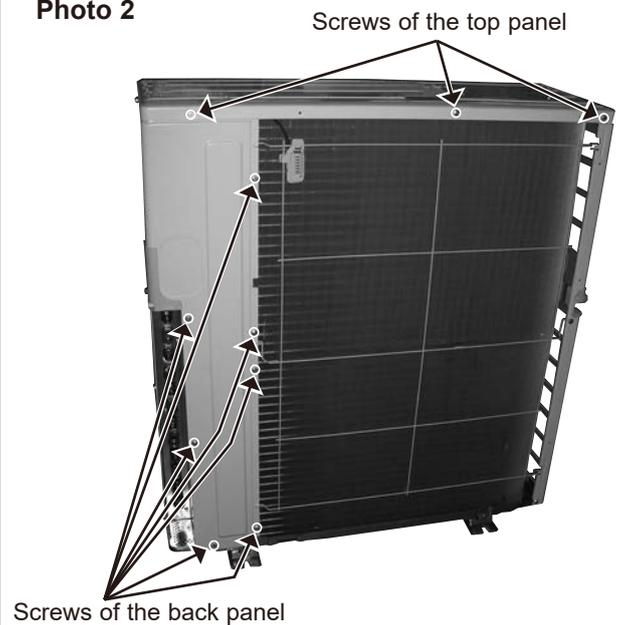


### PHOTOS/FIGURES

**Photo 1**



**Photo 2**

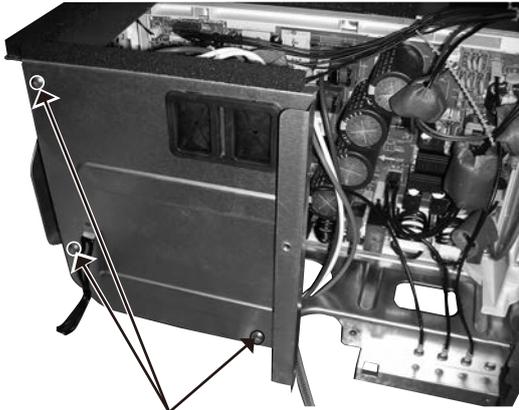


## OPERATING PROCEDURE

### 2. Removing the outdoor control P.C. board, the reactor and the outdoor power P.C. board

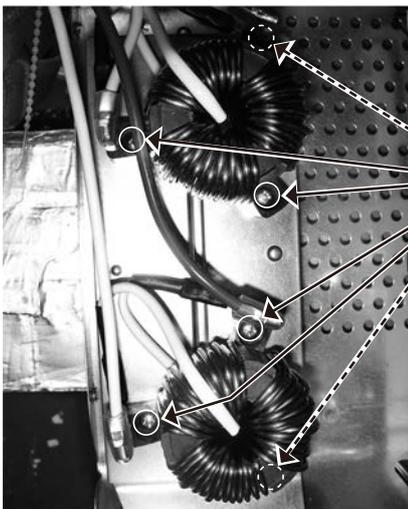
- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply cord and indoor/outdoor connecting wire.
- (3) Disconnect the connectors on the outdoor control P.C. board.
- (4) Remove the screws fixing the outdoor control P.C. board, and remove the outdoor control P.C. board.
- (5) Remove the screws fixing the electrical parts, and remove the electrical parts.
- (6) Remove the screws fixing the TB support, and remove the TB support.
- (7) Remove the screws fixing the control box separator, and remove the control box separator.
- (8) Disconnect the lead wire of the outdoor power P.C. board.
- (9) Remove the screws fixing the outdoor power P.C. board, and remove the outdoor power P.C. board with the outdoor P.C. board holder.
- (10) Remove the screws fixing the control box F, and remove the control box F.
- (11) Remove the screws fixing the reactors, and remove the reactors.

Photo 7



Screws of the control box F

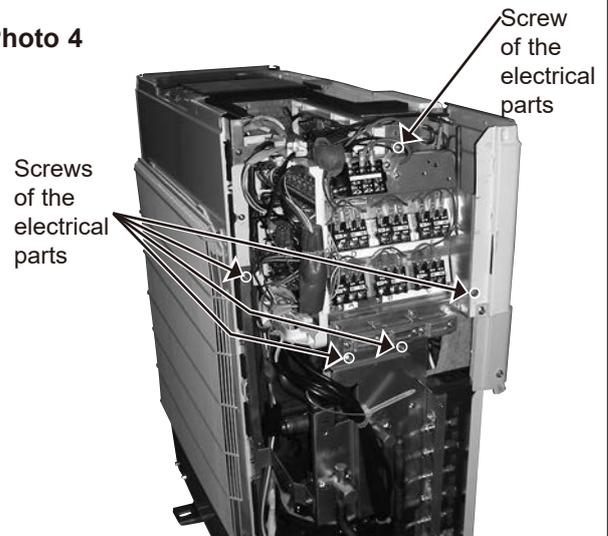
Photo 8



Screws of the reactor

## PHOTOS/FIGURES

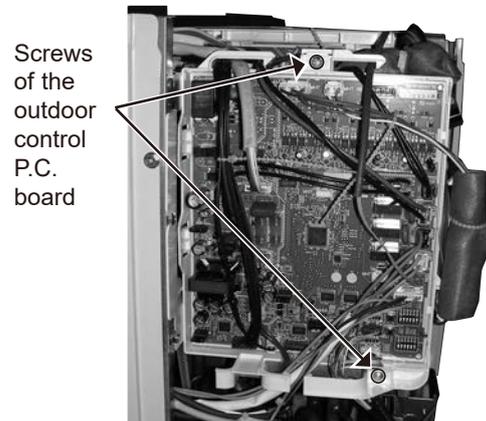
Photo 4



Screws of the electrical parts

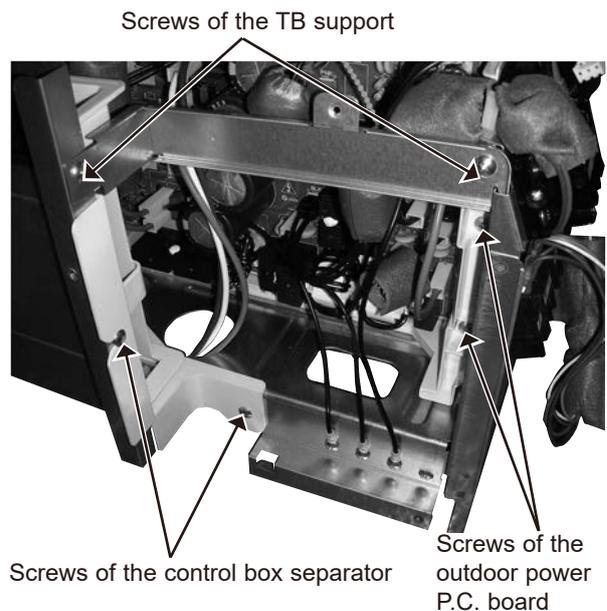
Screw of the electrical parts

Photo 5



Screws of the outdoor control P.C. board

Photo 6



Screws of the TB support

Screws of the control box separator

Screws of the outdoor power P.C. board

## OPERATING PROCEDURE

### 3. Removing the fan motor

- (1) Remove the service panel, the top panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply cord and indoor/outdoor connecting wire.
- (3) Disconnect the connector CNF1 on the outdoor control P.C. board.
- (4) Remove the propeller fan.
- (5) Remove the fan motor.

### 4. Removing the compressor and 4-way valve

- (1) Remove the service panel, the top panel, the back panel and the front panel (Refer to section 1).
- (2) Disconnect the power supply cord and indoor/outdoor connecting wire, and remove the back panel.
- (3) Recover gas from the refrigerant circuit.  
**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).
- (5) Disconnect the compressor lead wire from the terminal of the compressor (U, V, W).
- (6) Disconnect the outdoor control P.C. board connectors: CNF1, CNTH1, CNTH2, CN63H, CN712, CN713, CN714, CN791, CN792, CN793, CN794, CN795
- (7) Remove the screws fixing the electrical parts, and remove the electrical parts (Photo 4).
- (8) Remove the propeller fan.
- (9) Remove the screws fixing the VB fixture, and remove the VB fixture.
- (10) Remove the screws fixing the separator, and remove the separator.  
**NOTE:** When installing the separator, insert the tabs of the heat exchanger into the separator.
- (11) Remove the sound proof felt.
- (12) Detach the brazed parts of the suction and discharge pipes (Photo 11).
- (13) Remove the nuts of the compressor, and remove the compressor (Photo 11).
- (14) Detach the brazed parts of 4-way valve and pipes.

## PHOTOS/FIGURES

Photo 9

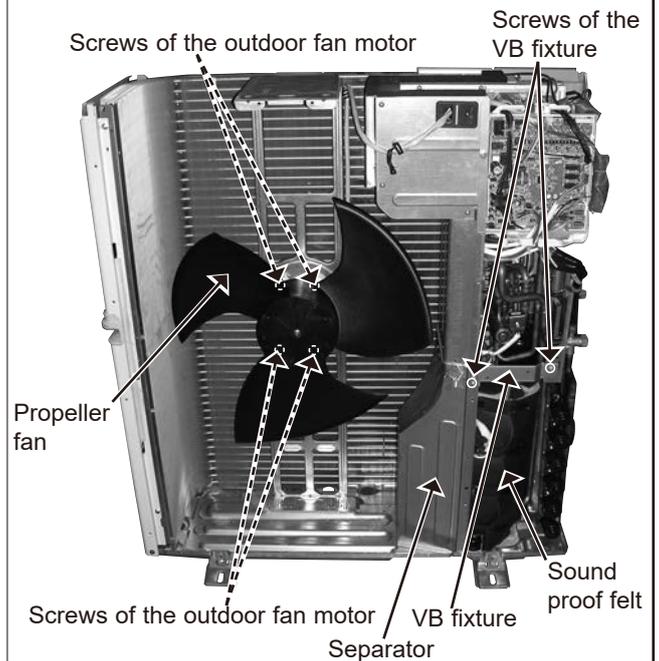
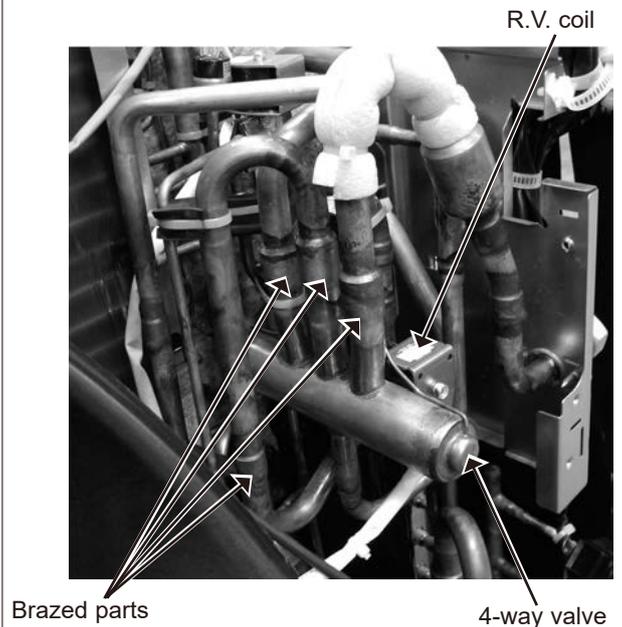
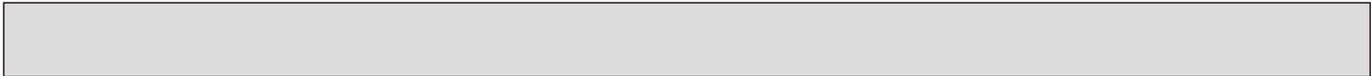
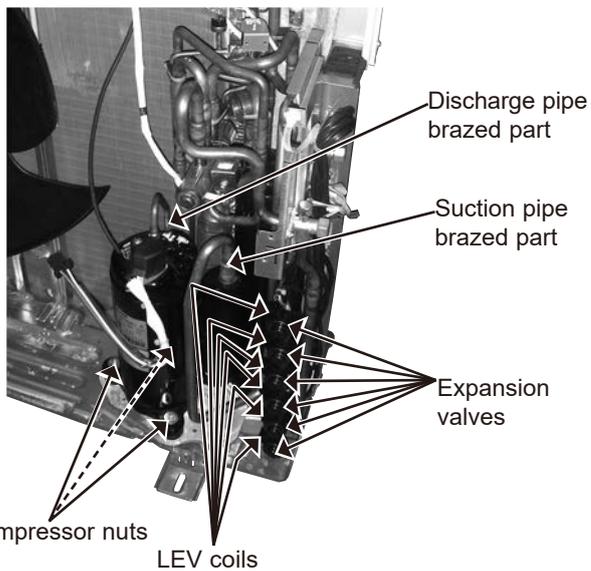


Photo 10





OPERATING PROCEDURE	PHOTOS/FIGURES
<p><b>5. Removing the expansion valve</b></p> <p>(1) Remove the service panel and the top panel (Refer to section 1).</p> <p>(2) Disconnect the power supply cord and indoor/outdoor connecting wire. (Gas recovery is not required if the unit is pumped down.)</p> <p>(3) Remove the LEV coils.</p> <p>(4) Detach the brazed parts of expansion valves and pipes.</p>	<p><b>Photo 11</b></p>  <p>Discharge pipe brazed part</p> <p>Suction pipe brazed part</p> <p>Expansion valves</p> <p>LEV coils</p> <p>Compressor nuts</p>

# MITSUBISHI ELECTRIC CORPORATION

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Made in Japan

Specifications are subject to change without notice.

# Air Conditioners

Indoor unit

## Кондиционеры

ВНУТРЕННИЙ БЛОК

# SLZ-M15, M25, M35, M50, M60FA



### OPERATION MANUAL

FOR USER

For safe and correct use, please read this operation manual thoroughly before operating the air-conditioner unit.

### BEDIENUNGSHANDBUCH

FÜR BENUTZER

Zum sicheren und einwandfreien Gebrauch der Klimaanlage dieses Bedienungshandbuch vor Inbetriebnahme gründlich durchlesen.

### MANUEL D'UTILISATION

POUR L'UTILISATEUR

Pour une utilisation correcte sans risques, veuillez lire le manuel d'utilisation en entier avant de vous servir du climatiseur.

### BEDIENINGSHANDLEIDING

VOOR DE GEBRUIKER

Voor een veilig en juist gebruik moet u deze bedieningshandleiding grondig doorlezen voordat u de airconditioner gebruikt.

### MANUAL DE INSTRUCCIONES

PARA EL USUARIO

Lea este manual de instrucciones hasta el final antes de poner en marcha la unidad de aire acondicionado para garantizar un uso seguro y correcto.

### ISTRUZIONI DI FUNZIONAMENTO

PER L'UTENTE

Leggere attentamente questi istruzioni di funzionamento prima di avviare l'unità, per un uso corretto e sicuro della stessa.

### ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ ΧΡΗΣΕΩΣ

ΓΙΑ ΤΟΝ ΧΡΗΣΤΗ

Για ασφάλεια και σωστή χρήση, παρακαλείστε διαβάσετε προσεκτικά αυτό το εγχειρίδιο χρήσεως πριν θέσετε σε λειτουργία τη μονάδα κλιματισμού.

### MANUAL DE OPERAÇÃO

PARA O UTILIZADOR

Para segurança e utilização correctas, leia atentamente o manual de operação antes de pôr a funcionar a unidade de ar condicionado.

### DRIFTSMANUAL

TIL BRUGER

Læs venligst denne driftsmanual grundigt før airconditionanlægget betjenes af hensyn til sikker og korrekt brug.

### DRIFTSMANUAL

FÖR ANVÄNDAREN

Läs denna driftsmanual noga för säkert och korrekt bruk innan luftkonditioneringen används.

### İŞLETME ELKİTABI

KULLANICI İÇİN

Emniyetli ve doğru biçimde nasıl kullanılacağını öğrenmek için lütfen klima cihazını işletmeden önce bu elkitabını dikkatle okuyunuz.

### РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ

ДЛЯ ПОЛЬЗОВАТЕЛЯ

Для обеспечения правильного и безопасного использования следует ознакомиться с инструкциями, указанными в данном руководстве по эксплуатации, тщательным образом до того, как приступить к использованию кондиционера.

### BRUKSANVISNING

FOR BRUKER

Vennligst les nøye gjennom denne bruksanvisningen, for sikkert og riktig bruk av klimaanlegget.

### INSTRUKCJA OBSŁUGI

INFORMACJA DLA UŻYTKOWNIKA

Aby zapewnić bezpieczne i prawidłowe korzystanie z urządzenia, należy wcześniej uważnie przeczytać niniejszą instrukcję obsługi.

English

Deutsch

Français

Nederlands

Español

Italiano

Ελληνικά

Português

Dansk

Svenska

Türkçe

Русский

Norsk

Polski

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## Remarque



Fig. 1

Ce symbole est utilisé uniquement pour les pays de l'UE.

Ce symbole est conforme à la directive 2012/19/UE Article 14 Informations pour les utilisateurs et à l'Annexe IX, et/ou à la directive 2006/66/CE Article 20 Information de l'utilisateur final et à l'Annexe II.

Votre produit Mitsubishi Electric est conçu et fabriqué avec des matériaux et des composants de qualité supérieure qui peuvent être recyclés et/ou réutilisés. Ce symbole signifie que les équipements électriques et électroniques, les batteries et les accumulateurs, à la fin de leur durée de service, doivent être éliminés séparément des ordures ménagères. Si un symbole chimique est imprimé sous le symbole (Fig.1), il signifie que la batterie ou l'accumulateur contient une certaine concentration de métal lourd.

Elle sera indiquée comme suit : Hg : mercure (0,0005%), Cd : cadmium (0,002%), Pb : plomb (0,004%)

Dans l'Union Européenne, il existe des systèmes sélectifs de collecte pour les produits électriques et électroniques, les batteries et les accumulateurs usagés. Nous vous prions donc de confier cet équipement, ces batteries et ces accumulateurs à votre centre local de collecte/recyclage. Aidez-nous à conserver l'environnement dans lequel nous vivons ! Les machines ou appareils électriques et électroniques contiennent souvent des matières qui, si elles sont traitées ou éliminées de manière inappropriée, peuvent s'avérer potentiellement dangereuses pour la santé humaine et pour l'environnement. Cependant, ces matières sont nécessaires au bon fonctionnement de votre appareil ou de votre machine. Pour cette raison, il vous est demandé de ne pas vous débarrasser de votre appareil ou machine usagé avec vos ordures ménagères.

## Remarque :

Dans le présent manuel d'utilisation, l'expression "Télécommande filaire" fait référence au modèle PAR-33MAA. Pour toute information relative à un autre modèle de télécommande, reportez-vous au livret d'instructions fourni dans la boîte de cette dernière.

## 1. Consignes de sécurité

- ▶ Avant d'installer le climatiseur, lire attentivement toutes les "Consignes de sécurité".
- ▶ Les "Consignes de sécurité" reprennent des points très importants concernant la sécurité. Veuillez bien à les suivre.
- ▶ Veuillez consulter ou obtenir la permission votre compagnie d'électricité avant de connecter votre système.

## Symboles utilisés dans le texte

### ⚠ Avertissement:

Précautions à suivre pour éviter tout danger de blessure ou de décès de l'utilisateur.

### ⚠ Précaution:

Décrit les précautions qui doivent être prises pour éviter d'endommager l'appareil.

## Symboles utilisés dans les illustrations

⌚ : Indique un élément qui doit être mis à la terre.

## SIGNIFICATION DES SYMBOLES AFFICHÉS SUR L'APPAREIL

	<b>AVERTISSEMENT</b> (Risque d'incendie)	Ce symbole est utilisé uniquement pour le réfrigérant R32. Le type de réfrigérant est indiqué sur la plaque signalétique de l'appareil extérieur. Si le type de réfrigérant est le R32, cet appareil utilise un réfrigérant inflammable. Si le réfrigérant fuit et entre en contact avec une flamme ou une pièce chaude, il produira un gaz toxique et un incendie risque de se déclencher.
		Veuillez lire le MANUEL D'INSTALLATION avec soin avant utilisation.
		Le personnel d'entretien est tenu de lire avec soin le MANUEL D'UTILISATION et le MANUEL D'INSTALLATION avant utilisation.
		De plus amples informations sont disponibles dans le MANUEL D'UTILISATION, le MANUEL D'INSTALLATION et documents similaires.

### ⚠ Avertissement:

- Ces appareils ne sont pas accessibles au public.
- Cet appareil ne doit pas être installé par l'utilisateur. Demander au revendeur ou à une société agréée de l'installer. Si l'appareil n'est pas correctement installé il peut y avoir un risque de fuite d'eau, d'électrocution ou d'incendie.
- Ne pas marcher sur l'appareil ni y déposer des objets.
- Ne jamais éclabousser l'appareil ni le toucher avec des mains humides. Il pourrait en résulter un risque d'électrocution.
- Ne pas vaporiser de gaz inflammable à proximité de l'appareil sous risque d'incendie.
- Ne pas placer de chauffage au gaz ou tout autre appareil fonctionnant avec une flamme vive là où il serait exposé à l'échappement d'air du climatiseur. Cela risquerait de provoquer une mauvaise combustion.
- Ne pas retirer la face avant ou la protection du ventilateur de l'appareil extérieur pendant son fonctionnement.
- Si vous remarquez des vibrations ou des bruits particulièrement anormaux, arrêter l'appareil, éteindre l'interrupteur et prendre contact avec le revendeur.
- Ne jamais mettre des doigts, des bâtons, etc. dans les entrées et sorties d'air.
- Si vous sentez des odeurs étranges, arrêter l'appareil, le mettre hors tension et contacter le revendeur. Si vous ne procédez pas de cette façon, il pourrait y avoir risque de panne, d'électrocution ou d'incendie.
- Ne JAMAIS laisser des enfants ou des personnes handicapées utiliser le climatiseur sans surveillance.
- Toujours surveiller que les jeunes enfants ne jouent pas avec le climatiseur.
- Si le gaz de réfrigérant fuit, arrêter le fonctionnement du climatiseur, aérer convenablement la pièce et prendre contact avec le revendeur.
- Cet appareil est conçu pour être utilisé par des utilisateurs experts ou spécialement formés dans des ateliers, dans l'industrie légère ou des exploitations agricoles, ou pour une utilisation commerciale par des non-spécialistes.
- Cet appareil peut être utilisé par des enfants de 8 ans et plus et des personnes dont les capacités mentales, sensorielles ou physiques sont réduites, ou man-

- quant d'expérience et de connaissances, dès lors qu'elles sont supervisées ou ont reçu une formation relative à l'utilisation de l'appareil et comprennent les dangers associés à celui-ci. Les enfants ne doivent pas jouer avec l'appareil. Le nettoyage et l'entretien ne peuvent pas être effectués par un enfant sans surveillance.
- Cet appareil n'est pas conçu pour être utilisé par des personnes (y compris des enfants) présentant des capacités physiques, sensorielles ou mentales réduites, ou manquant d'expérience et de connaissances, à moins qu'elles ne soient supervisées ou aient reçu des instructions relatives à l'utilisation de l'appareil par une personne responsable de leur sécurité.
- Les enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec l'appareil.
- Lors de l'installation, du déplacement ou de l'entretien du climatiseur, n'utilisez que le réfrigérant indiqué sur l'appareil extérieur pour remplir les tuyaux de réfrigérant. Ne pas le mélanger avec un autre réfrigérant et faire le vide d'air dans les tuyaux.
- Si du réfrigérant est mélangé avec de l'air, cela peut provoquer des pointes de pression dans les tuyaux de réfrigérant et entraîner une explosion et d'autres risques. L'utilisation d'un réfrigérant différent de celui spécifié pour le climatiseur peut entraîner des défaillances mécaniques, des dysfonctionnements du système ou une panne de l'appareil. Dans le pire des cas, cela peut entraîner un obstacle à la mise en sécurité du produit.
- Cet appareil doit être installé dans des pièces dont l'espace au sol est supérieur à celui indiqué dans le manuel d'installation de l'appareil extérieur. Consulter le manuel d'installation de l'appareil extérieur.
- Ne faites usage d'aucun moyen visant à accélérer le processus de dégivrage ou à nettoyer autre que ceux recommandés par le fabricant.
- L'appareil doit être rangé dans une pièce ne contenant aucune source d'allumage continue (exemple : flammes nues, appareil à gaz ou chauffage électrique).
- Ne percez pas et ne brûlez pas l'appareil.
- Sachez que les réfrigérants peuvent être inodores.

# 1. Consignes de sécurité

## ⚠ Précaution:

- Ne pas utiliser d'objet pointu pour enfoncer les touches car cela risquerait d'endommager la commande à distance.
- Ne jamais obstruer les entrées et sorties des appareils extérieurs et intérieurs.

## Rangement de l'appareil

Lorsque vous devez ranger l'appareil, veuillez consulter votre revendeur.

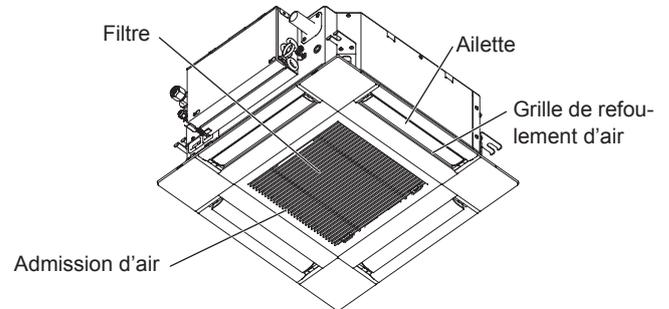
# 2. Nomenclature

## ■ Unité interne

	SLZ-M-FA
Modes du ventilateur	3 modes
Ailette	Auto avec variation
Louvre	-
Filtre	Longue durée
Témoin de nettoyage du filtre	2.500 heures
Réglage du n° de modèle de télécommande sans fil	002

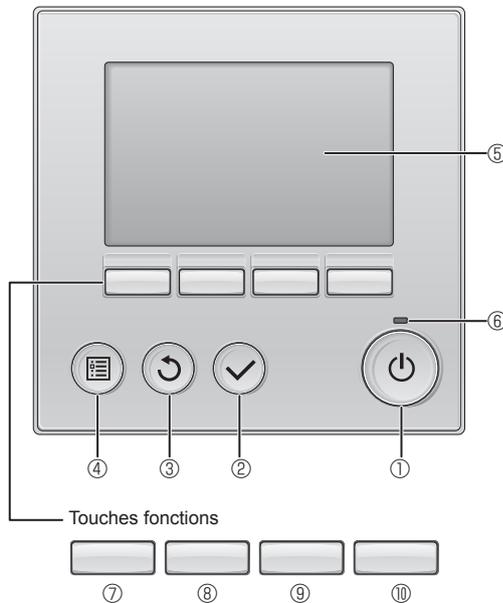
## ■ SLZ-M-FA

Plafonnier à Cassette 4 volets



## ■ Télécommande filaire

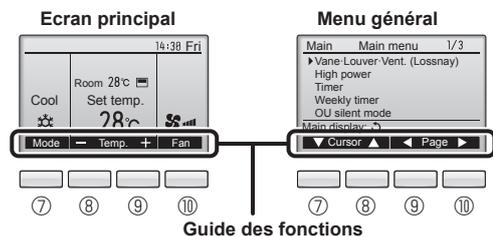
### Interface de la télécommande



Les fonctions réalisées par les touches varient en fonction de l'écran.

Consultez le guide des touches en bas de l'écran LCD pour voir les fonctions correspondant à un écran donné.

Lorsque le système est piloté à distance, le guide de fonction des touches n'apparaît pas pour les touches verrouillées.



### ① Touche [MARCHE / ARRÊT]

Pressez pour allumer ou éteindre l'appareil intérieur.

### ② Touche [CHOIX]

Pressez pour enregistrer les paramètres.

### ③ Touche [RETOUR]

Pressez pour revenir à l'écran précédent.

### ④ Touche [MENU]

Pressez pour ouvrir le Menu général.

### ⑤ Écran LCD rétroéclairé

Les paramètres de fonctionnement s'affichent.

Lorsque le rétroéclairage est éteint, appuyer sur une touche l'allume, et il reste allumé pendant un certain temps en fonction de l'affichage.

Lorsque le rétroéclairage est éteint, appuyer sur une touche ne fait que l'allumer, sans exécuter la fonction. (à l'exception de la touche [MARCHE / ARRÊT])

### ⑥ Voyant Marche / Arrêt

Cette lampe s'allume en vert lorsque le système est en fonctionnement. Elle clignote lorsque la télécommande est en cours de démarrage ou en cas d'erreur.

### ⑦ Touche fonction [F1]

Ecran principal : Pressez pour régler le mode de fonctionnement.

Menu général : Pressez pour faire descendre le curseur.

### ⑧ Touche fonction [F2]

Ecran principal : Pressez pour diminuer la température.

Menu général : Pressez pour faire monter le curseur.

### ⑨ Touche fonction [F3]

Ecran principal : Pressez pour augmenter la température.

Menu général : Pressez pour revenir à l'écran précédent.

### ⑩ Touche fonction [F4]

Ecran principal : Pressez pour changer la vitesse du ventilateur.

Menu général : Pressez pour aller à la page suivante.

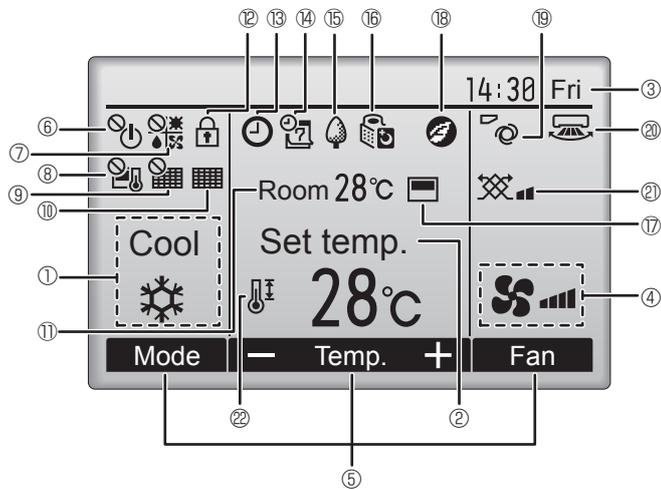
## 2. Nomenclature

### Afficheur

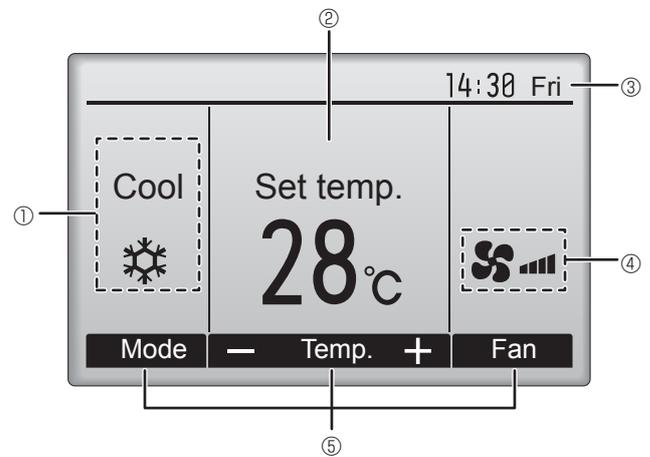
L'écran principal peut être affiché dans deux modes différents : "complet" et "basic". Le réglage usine est "complet". Pour passer au mode "basic", changez-le dans l'écran principal. (Reportez-vous au manuel d'utilisation inclus avec la télécommande.)

<Mode complet>

\* Toutes les icônes sont affichées pour la compréhension.



<Mode basic>



#### ① Mode de fonctionnement

Le mode de fonctionnement de l'appareil intérieur s'affiche ici.

#### ② Température programmée

La température programmée s'affiche ici.

#### ③ Horloge (Voir le manuel d'installation.)

L'heure actuelle s'affiche ici.

#### ④ Vitesse du ventilateur

Le réglage de la vitesse de ventilation apparaît ici.

#### ⑤ Guide des fonctions des touches

Les fonctions correspondant aux touches s'affichent ici.



S'affiche lorsque la marche et l'arrêt sont pilotés de façon centralisée.



S'affiche lorsque le mode de fonctionnement est piloté de façon centralisée.



S'affiche lorsque la température sélectionnée est pilotée de façon centralisée.



S'affiche si la remise à zéro du filtre est pilotée de façon centralisée.



Indique si le filtre a besoin d'entretien.

#### ⑪ Température de la pièce (Voir le manuel d'installation.)

La température actuelle de la pièce s'affiche ici.



S'affiche lorsque les touches sont verrouillées.



Apparaît lorsque la fonction « ON/OFF timer », « Réduit de nuit » ou « Arrêt Auto » timer est activée.

⑬ apparaît lorsque le timer est désactivé par le système de contrôle centralisé.



S'affiche si le programmeur hebdomadaire est activé.



S'affiche lorsque le système est en mode économie d'énergie. (Ceci n'apparaîtra pas sur certains modèles d'unités intérieures)



S'affiche lorsque les appareils extérieurs sont en mode silencieux.



S'affiche lorsque la thermistance intégrée à la télécommande est utilisée pour mesurer la température de la pièce (⑪).

⑱ s'affiche lorsque la thermistance de l'appareil intérieur est utilisée pour mesurer la température de la pièce.



S'affiche quand les unités fonctionnent en mode d'économie d'énergie avec le capteur 3D i-See.



Indique le réglage du déflecteur.



Indique le réglage des ailettes.



Indique les réglages de la ventilation.

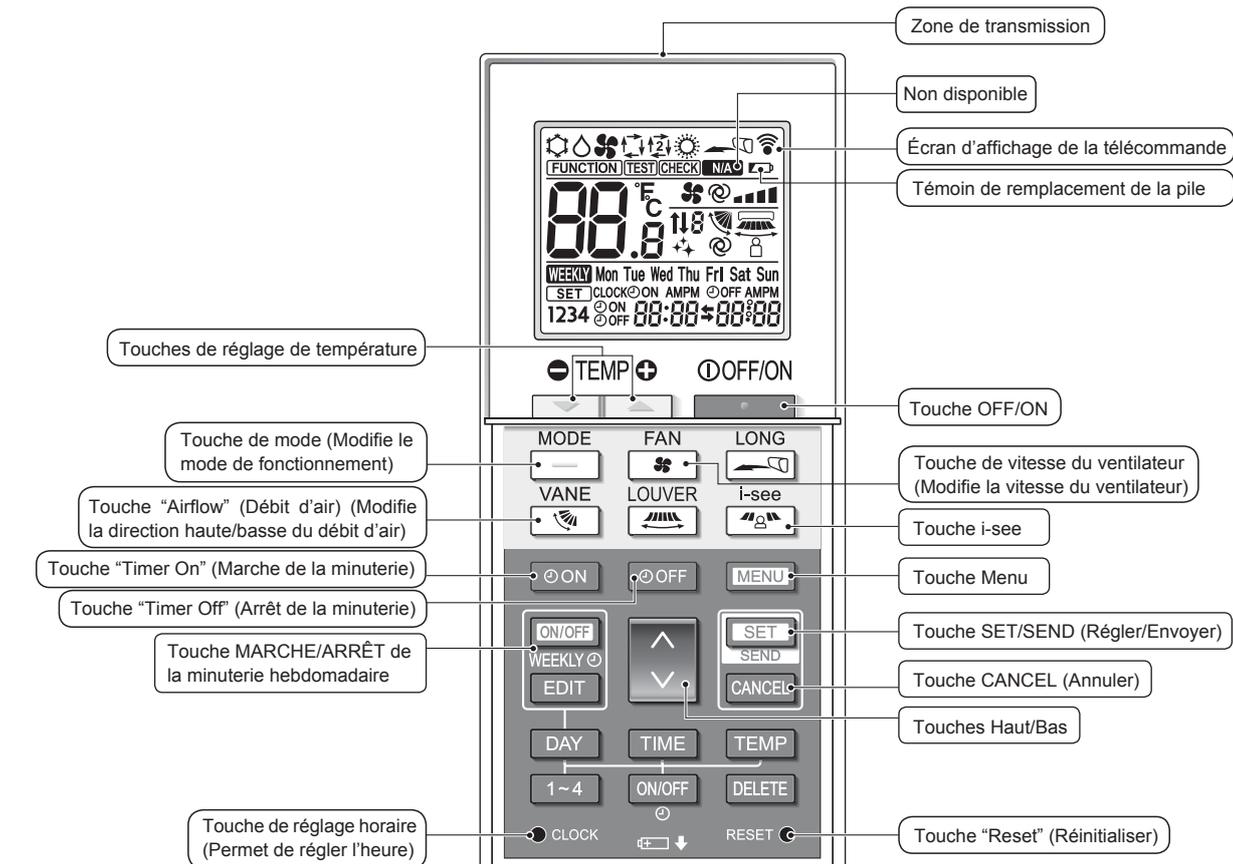


S'affiche lorsque la plage de température de réglage est réduite.

La plupart des paramètres (à l'exception de la Marche / Arrêt, du mode, de la vitesse du ventilateur, de la température) peuvent être réglés à partir de l'écran du menu. (Reportez-vous au manuel d'utilisation inclus avec la télécommande.)

## 2. Nomenclature

### ■ Pour la télécommande sans fil



#### Mode de fonctionnement

- ❄️ Froid    💧 Déshu.
- 🌀 Ventil.    🔄 Auto (point de réglage unique)
- ☀️ Chaud    🔄 Auto\* (point de réglage double)

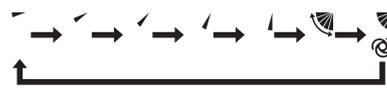
\* Le réglage initial est nécessaire. Voir le manuel d'installation.

#### Réglage de la température

Les unités de température peuvent être changées. Pour plus de détails, voir le manuel d'installation.

#### Réglage du déflecteur

Étape 1    Étape 2    Étape 3    Étape 4    Étape 5    Balayage Auto



#### Non disponible

S'affiche lorsqu'une fonction non prise en charge est sélectionnée.

#### Témoin de remplacement de la pile

S'affiche lorsque la capacité résiduelle de la batterie est faible.

#### Réglage de la vitesse du ventilateur



#### Capteur 3D i-see (distribution d'air)

Par défaut    Direct    Indirect    Quand Direct ou Indirect est sélectionné, le réglage des ailettes est réglé sur "Auto".

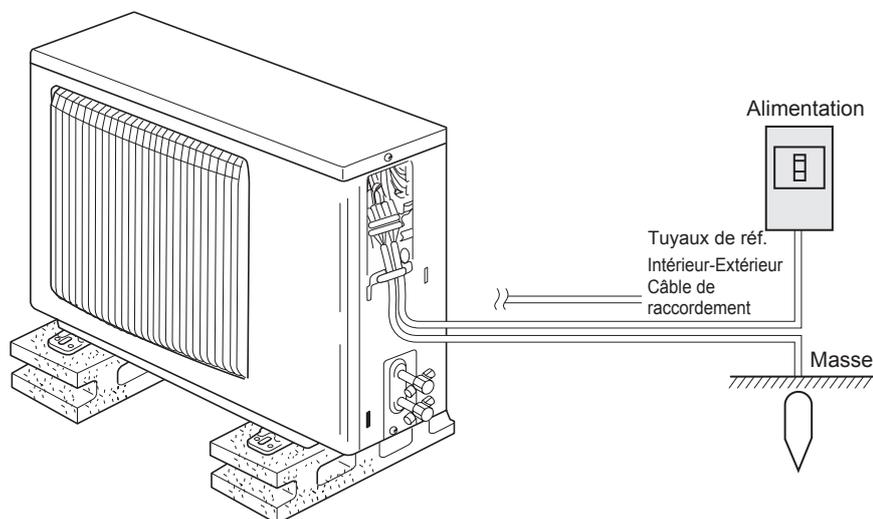


## 2. Nomenclature

### Remarques (Pour télécommande sans fil uniquement) :

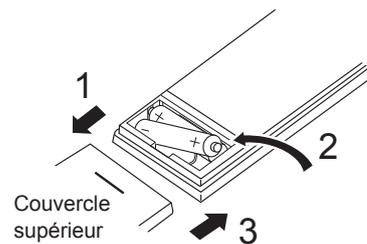
- Pour utiliser la télécommande sans fil, pointez-la vers le récepteur de l'appareil intérieur.
- Si la télécommande est utilisée dans les deux minutes qui suivent l'alimentation de l'appareil intérieur, l'appareil peut émettre deux bips successifs indiquant que le contrôle automatique initial est en cours.
- L'appareil intérieur émet des bips pour confirmer que le signal transmis par la télécommande a été reçu. Les signaux peuvent être reçus jusqu'à 7 mètres environ en ligne droite à partir de l'appareil intérieur et dans une zone de 45° vers la gauche ou la droite de l'appareil. Cependant, une lumière vive ou fluorescente peut gêner la réception de signaux de l'appareil intérieur.
- L'appareil doit être contrôlé si le voyant d'opération près du récepteur de l'unité intérieure cli-gnote. Consultez votre revendeur pour le service.
- Manipulez la télécommande avec précaution ! Ne la faites pas tomber et ne lui infligez pas de chocs violents. De plus, évitez de mouiller la télécommande et ne la laissez pas dans un endroit humide.
- Pour éviter de chercher la télécommande, placez le support fourni avec la télécommande sur un mur et veillez à replacer la télécommande dans le support après chaque utilisation.
- Si l'appareil intérieur émet 4 bips lorsque vous utilisez la télécommande sans fil, changez le réglage de mode automatique en mode AUTO (point de réglage unique) ou AUTO (point de réglage double).  
Pour plus d'informations, reportez-vous à la notice jointe (feuille A5) ou au manuel d'installation.

### ■ Unité externe



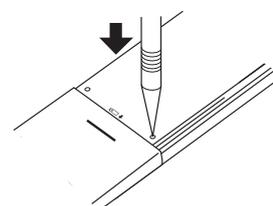
### Insertion/remplacement de la pile

1. Retirez le couvercle supérieur, insérez deux piles LR6 AA, puis reposez le couvercle.



Deux piles LR6 AA  
Insérez d'abord le pôle (-) négatif de chaque pile. Insérez les piles en respectant la polarité indiquée (+, -)!

2. Appuyez sur la touche "Reset" (Réinitialiser).



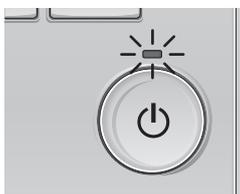
Appuyez sur la touche "Reset" (Réinitialiser) avec un objet dont l'extrémité est étroite.

## 3. Fonctionnement

- Concernant le mode de fonctionnement, reportez-vous au manuel d'utilisation fourni avec chaque télécommande.

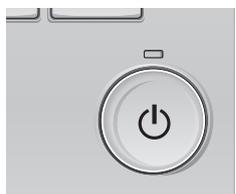
### 3.1. Marche/arrêt

#### [MARCHE]



Pressez la touche [MARCHE / ARRÊT].  
La lampe Marche / Arrêt s'allume en vert, et l'appareil démarre.

#### [ARRÊT]



Pressez à nouveau la touche [MARCHE / ARRÊT].  
La lampe Marche / Arrêt s'éteint, et l'appareil s'arrête.

#### Remarque :

Même si vous appuyez sur la touche Marche/Arrêt immédiatement après le début de la procédure d'arrêt, le climatiseur ne redémarrera pas avant 3 minutes environ.

Ceci a pour but d'éviter le risque d'endommagement des composants internes.

### 3. Fonctionnement

#### ■ Mémoire de l'état de fonctionnement

	Réglage de la télécommande
Mode de fonctionnement	Mode de fonctionnement avant la mise hors tension
Température programmée	Température programmée avant la mise hors tension
Vitesse du ventilateur	Vitesse du ventilateur avant la mise hors tension

#### ■ Plage de réglage de la température

Mode de fonctionnement	Plage de réglage de la température
Froid / Déshu.	19 – 30 °C
Chaud	17 – 28 °C
Auto	19 – 28 °C
Ventil.	Non réglable

### 3.2. Sélection du mode

Appuyez sur la touche [F1] pour balayer les modes de fonctionnement parmi : "Cool" (Froid), "Dry" (Déshu.), "Fan" (Ventil.), "Auto", et "Heat" (Chaud). Sélectionnez le mode de fonctionnement désiré.

- Les modes de fonctionnement qui ne sont pas disponibles pour les modèles d'appareils intérieurs connectés n'apparaîtront pas sur l'écran.

**Que signifie le fait que l'icône du mode clignote**  
L'icône de mode clignote lorsque d'autres appareils intérieurs du même système réfrigérant (connectés au même appareil extérieur) sont déjà dans un mode différent. Dans ce cas, les autres appareils du même groupe ne peuvent fonctionner que dans le même mode.

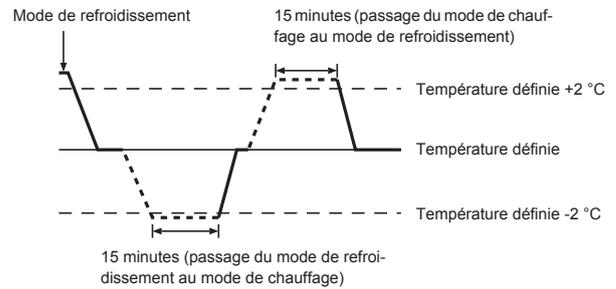
#### Informations concernant les climatiseurs multisystèmes (Appareil extérieur de la série MXZ)

- Les climatiseurs multi-systèmes (avec un appareil extérieur de la série MXZ) permettent de raccorder deux ou davantage d'appareils intérieurs à un appareil extérieur. En fonction de la capacité, plusieurs appareils intérieurs peuvent ainsi fonctionner simultanément.
- Lorsque vous essayez de faire fonctionner simultanément deux ou davantage d'appareils intérieurs reliés à un seul appareil extérieur, un pour le refroidissement et l'autre pour le chauffage, le mode de fonctionnement sélectionné sera celui de l'appareil intérieur qui a été mis en fonctionnement en premier. Les autres unités intérieures ne peuvent pas démarrer. Un voyant clignotant indique l'état de fonctionnement. Dans ce cas, régler tous les appareils intérieurs sur le même mode de fonctionnement.
- Il se peut que l'unité intérieure, qui fonctionne en mode "Auto", ne puisse passer en mode "Cool" (Froid)/"Heat" (Chaud) et se mette en veille.
- Lorsque l'appareil intérieur se met en fonctionnement alors que le dégivrage de l'appareil extérieur est en cours, il faut laisser passer quelques minutes (max. environ 15 minutes) avant que l'appareil ne souffle de l'air chaud.
- Lorsque l'appareil fonctionne en mode chauffage, si le dessus de l'appareil chauffe ou que vous entendez le flux de gaz à l'intérieur, cette situation n'a rien d'anormal. Le gaz réfrigérant circule en effet de manière continue dans l'appareil intérieur même si celui-ci ne fonctionne pas.

#### Fonctionnement automatique

- En fonction de la température définie préalablement, l'opération de refroidissement débutera si la température de la pièce est trop élevée; à l'inverse, l'opération de chauffage débutera si la température de la pièce est trop basse.

- En mode de fonctionnement automatique, le climatiseur passera en mode de refroidissement si la température de la pièce varie et affiche 2 °C ou plus au-dessus de la température définie pendant 15 minutes. De la même façon, le climatiseur passera en mode de chauffage si la température de la pièce affiche 2 °C ou plus au-dessous de la température définie pendant 15 minutes.



### 3.3. Réglage de la température

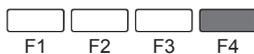
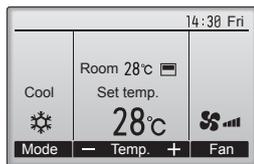
<Cool (Froid), Dry (Déshu.), Heat (Chaud), et Auto>

Exemple d'affichage (Centigrade avec incréments de 0,5- degrés)

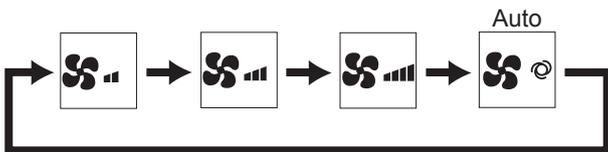
- Appuyez sur la touche [F2] pour diminuer la température programmée, et la touche [F3] pour l'augmenter.
- Consultez le tableau de la page 39 pour la plage de température réglable en fonction du mode de fonctionnement.
- La plage de température ne peut pas être programmée en mode ventilation.
- Les températures programmées sont affichées soit en Centigrade avec incréments de 0,5- ou 1-degrés, soit en Fahrenheit, selon le modèle d'unité intérieure et le réglage du mode d'affichage sur la télécommande.

## 3. Fonctionnement

### 3.4. Réglage de la vitesse du ventilateur



Pressez [F4] pour changer la vitesse du ventilateur, dans l'ordre suivant.



- Les vitesses de ventilation disponibles dépendent du modèle d'appareil intérieur.

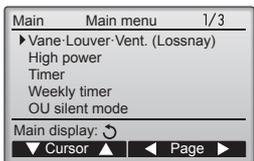
#### Remarques :

- Le nombre de ventilateurs disponible dépend du type d'unité connectée.
- Dans les cas suivants, la vitesse de ventilation actuelle générée par l'unité différera de la vitesse indiquée au niveau de la commande à distance.
  1. Lorsque l'écran affiche "STAND BY" (ATTENTE) ou "DEFROST" (DEGIVRE).
  2. Lorsque la température de l'échangeur thermique est basse en mode de chauffage. (par ex. immédiatement après le lancement de l'opération de chauffage)
  3. En mode CHAUFFAGE, quand la température ambiante dans la pièce est supérieure à la température réglée.
  4. Quand l'unité est en mode SEC.

### 3.5. Réglage de la direction du débit d'air

#### 3.5.1 Naviguer dans le Menu général

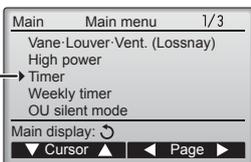
##### <Menu général>



Pressez la touche [MENU].  
Le Menu général apparaît.



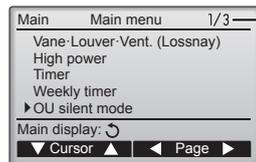
##### <Choix de la fonction>



Pressez [F1] pour faire descendre le curseur.  
Pressez [F2] pour faire monter le curseur.



##### <Naviguer dans les pages du menu>



Page

Pressez [F3] pour revenir à l'écran précédent.  
Pressez [F4] pour aller à la page suivante.



##### <Enregistrer les paramètres>

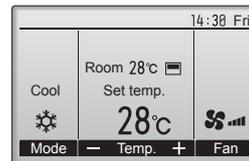


Sélectionnez l'élément désiré, et appuyez sur la touche [CHOIX].

L'écran correspondant s'affiche.



##### <Fermer le Menu général>

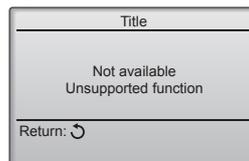


Pressez la touche [RETOUR] pour sortir du Menu général, et retourner sur l'écran principal.



Si aucune touche n'est appuyée pendant 10 minutes, l'affichage revient automatiquement à l'écran principal. Tous les paramètres qui n'ont pas été sauvegardés seront perdus.

##### <Affichage des fonctions non prises en charge>



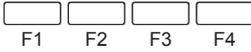
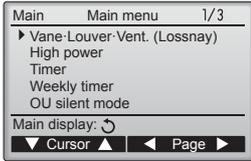
Le message à gauche s'affiche si l'utilisateur sélectionne une fonction non prise en charge par le modèle d'appareil intérieur considéré.



### 3. Fonctionnement

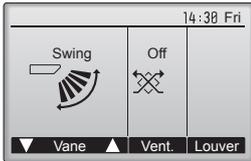
#### 3.5.2 Vane·Vent

<Accéder au menu>

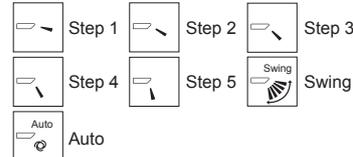


Sélectionnez "Vane·Louver·Vent. (Lossnay)" (Vane·Volet·Vent (Lossnay)) dans le Menu général (voir page 40), et appuyez sur la touche [CHOIX].

<Réglage du déflecteur>



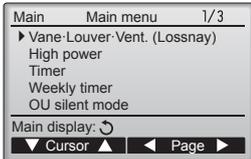
Pressez sur la touche [F1] ou [F2] pour choisir le réglage du déflecteur : "Step 1" (Étape 1), "Step 2" (Étape 2), "Step 3" (Étape 3), "Step 4" (Étape 4), "Step 5" (Étape 5), "Swing" (Balayage), et "Auto". Choisissez le réglage désiré.



Choisissez "Swing" (Balayage) que le déflecteur bouge de haut en bas automatiquement.

Lorsqu'il est réglé sur "Step 1" (Étape 1) à "Step 5" (Étape 5), le déflecteur se positionne à l'angle choisi.

<Retour au Menu général>



Appuyez sur la touche [RETOUR] pour revenir au Menu général.

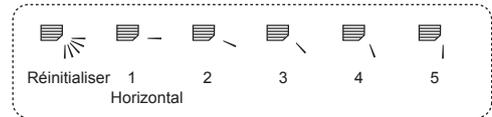
Remarques :

- Pendant l'oscillation, l'indication directionnelle à l'écran ne change pas en synchronisation avec les ailettes de l'unité.
- Les directions disponibles dépendent du type d'unités connectées.
- Dans les cas suivants, la direction actuelle de l'air différera de la direction indiquée au niveau de la commande à distance.
  1. Lorsque l'écran affiche "STAND BY" (ATTENTE) ou "DEFROST" (DEGIVRE).
  2. Immédiatement après le démarrage du mode CHAUFFAGE (alors que le système attend que le changement de mode se fasse).
  3. En mode chauffage, quand la température ambiante dans la pièce est supérieure à la température réglée.

#### < Comment régler la direction haute/basse du courant d'air >

Remarques :

- Cette fonction ne peut pas être réglée selon les différentes unités extérieures à connecter.
- Pour les séries SLZ-M·FA, seule la sortie particulière peut être fixée dans une certaine direction via les procédures détaillées ci-après. Seule la sortie réglée est fixée chaque fois que le climatiseur est allumé. (Les autres sorties suivent la direction haute/basse du courant d'air de la télécommande.)
- **Explication des termes**
  - "Refrigerant address No." (No. d'adresse du réfrigérant) et "Unit No." (No. d'unité) sont les numéros assignés à chaque climatiseur.
  - "No. de sortie" est le numéro assigné à chaque sortie du climatiseur. (Reportez-vous à l'illustration ci-dessous.)
  - "Direction haute/basse du courant d'air" est la direction (l'angle) à fixer.



Courant d'air horizontal



Vers le bas

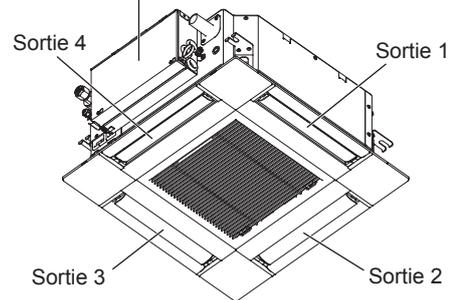
Réglage de la télécommande

La direction du courant d'air de cette sortie est contrôlée par le réglage de direction du courant d'air de la télécommande.

Fixation

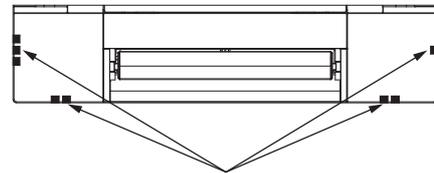
La direction du courant d'air de cette sortie est fixée dans une direction particulière.  
\* La direction de la sortie peut être fixée horizontalement pour éviter un courant d'air direct.

Boîtier des composants électriques



Remarque :

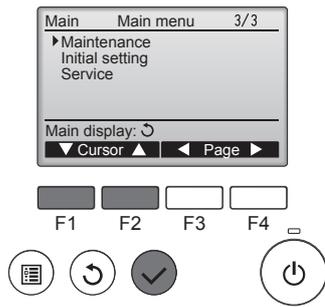
Le No. de sortie est indiqué par le nombre de rainures aux deux extrémités de chaque sortie d'air. Réglez la direction de l'air tout en vérifiant les informations indiquées sur l'affichage de la télécommande.



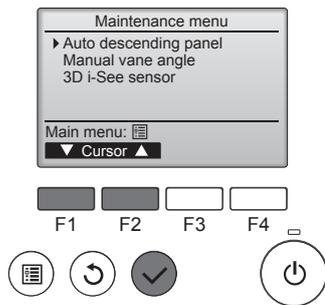
Marques d'identification de la sortie d'air

### 3. Fonctionnement

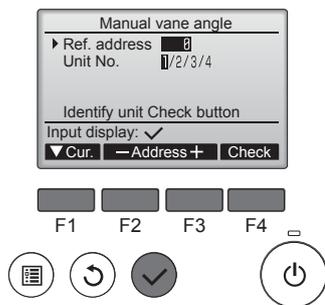
#### ■ Angle de rotation des volets (Télécommande filaire)



① Sélectionnez "Maintenance" dans le Menu général (voir page 40), et appuyez sur la touche [CHOIX].

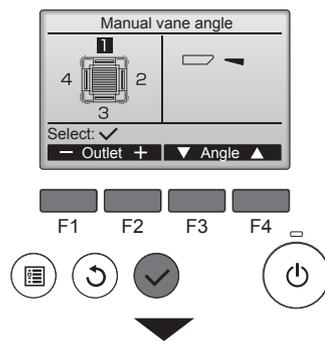


② Sélectionnez "Manual vane angle" (Angle de volet manuel) avec les touches [F1] ou [F2], et appuyez sur la touche [CHOIX].



③ Déplacez le curseur sur "Ref. address" (Adresse réf.) ou sur "Unit No." (No. Unité) avec la touche [F1]. Sélectionnez l'adresse du réfrigérant et le numéro d'unité avec la touche [F2] ou [F3] pour les unités dont les ailettes doivent être installées, puis appuyez sur la touche [CHOIX].

- Ref. address (Adresse réf.) : Adresse du réfrigérant
- Unit No. (No. Unité) : 1, 2, 3, 4 Appuyez sur la touche [F4] pour confirmer le numéro. L'ailette de l'appareil intérieur cible seulement est orientée vers le bas.



④ Le réglage actuel du déflecteur s'affiche.

Sélectionnez la sortie d'air désirée, de 1 à 4, à l'aide de [F1] et [F2].

- Sortie : "1", "2", "3", "4" et "1, 2, 3, 4 (Tous les sorties)"

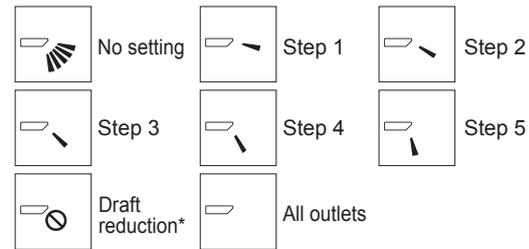
Appuyez sur la touche [F3] ou [F4] pour faire défiler les options dans l'ordre suivant : "No setting (reset)" (Pas de réglage (réinitialisation)), "Step 1" (Étape 1), "Step 2" (Étape 2), "Step 3" (Étape 3), "Step 4" (Étape 4), "Step 5" (Étape 5) et "Draft reduction" (Réduction des courants d'air)\*. Choisissez le réglage désiré.

\* Draft reduction (Réduction des courants d'air)  
Le sens du flux d'air pour ce réglage est plus horizontal que le sens du flux d'air de "Step 1" (Étape 1) afin de réduire la sensation de courant d'air. La réduction de courant d'air ne peut être réglée que pour 1 ailette.

**Remarque :**

N'utilisez pas le réglage Réduction des courants d'air dans un environnement très humide. De la condensation pourrait se former et s'égoutter.

#### ■ Réglage du déflecteur



Pressez la touche [CHOIX] pour enregistrer les paramètres. Un écran s'affiche pour vous informer que les réglages sont en cours d'envoi.

Les changements seront effectués sur la sortie sélectionnée. L'écran revient automatiquement à celui indiqué ci-dessus (Étape 5) à la fin de la transmission.

Effectuez les réglages pour les autres sorties, selon la même procédure.

**Si toutes les sorties sont sélectionnées, sera affiché à la prochaine mise en route de l'appareil.**

Naviguer dans les écrans  
 • Pour revenir au Menu général ..... Touche [MENU]  
 • Pour revenir à l'écran précédent ..... Touche [RETOUR]

#### ■ Angle des ailettes manuel (télécommande sans fil)

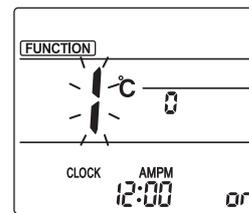


Fig. 1

① Accès au mode de réglage des ailettes manuel  
Appuyez sur la touche [MENU]. (Commencez cette opération lorsque l'affichage de la télécommande est éteint.) "FUNCTION" s'allume et "1" clignote. (Fig. 1)  
Appuyez sur la touche pour sélectionner "2" puis appuyez sur la touche [SET].

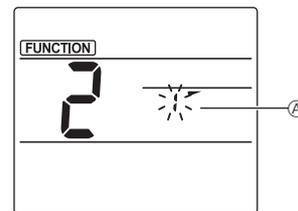


Fig. 2

② Sélection du numéro d'ailette (Fig. 2)  
Appuyez sur les touches pour sélectionner le numéro d'ailette **A**, puis appuyez sur la touche [SET].

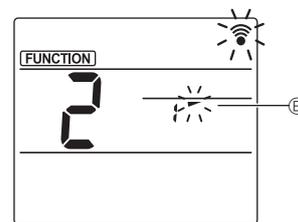


Fig. 3

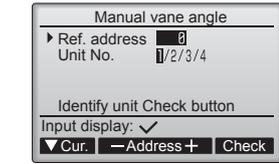
③ Réglage de l'angle d'ailette (Fig. 3)  
Appuyez sur les touches pour sélectionner l'angle d'ailette **B**. Pointez la télécommande sans fil vers le récepteur de l'appareil intérieur, puis appuyez sur la touche [SET].

Affichage				
Réglage	Étape 1	Étape 2	Étape 3	Étape 4
Affichage			Pas d'affichage	
Réglage	Étape 5	Aucun réglage	Réduction des courants d'air*	

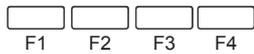
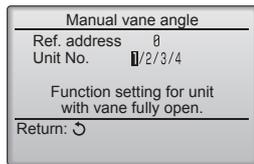
\* La réduction des courants d'air ne peut être réglée que pour 1 ailette. Le réglage n'est activé que pour la dernière ailette qui a été réglée.

## 3. Fonctionnement

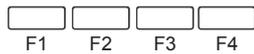
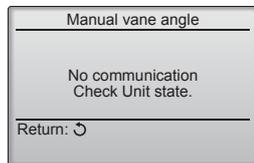
### ■ Procédure de vérification



- 1 Réglez d'abord "Ref. address" (Adresse réf.) sur 0 et "Unit No." (No.Unité) sur 1.
  - Déplacez le curseur sur "Ref. address" (Adresse réf.) ou sur "Unit No." (No.Unité) avec la touche [F1].
  - Sélectionnez l'adresse du réfrigérant et le numéro d'unité avec la touche [F2] ou [F3] pour les unités dont les ailettes doivent être installées, puis appuyez sur la touche [CHOIX].
  - Ref. address (Adresse réf.) : Adresse du réfrigérant
  - Unit No. (No.Unité) : 1, 2, 3, 4 Appuyez sur la touche [F4] pour confirmer le numéro.



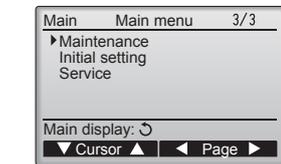
- 2 Changez le "Unit No." (No.Unité) dans l'ordre et vérifiez chaque unité.
  - Appuyez sur la touche [F1] pour sélectionner le "Unit No." (No. Unité). Appuyez sur la touche [F2] ou [F3] pour sélectionner le "N° unité" correspondant à l'unité à contrôler puis appuyez sur la touche [F4].
  - Après avoir appuyé sur la touche [F4], attendez plus ou moins 15 secondes puis vérifiez l'état actuel du climatiseur.
    - Le volet est orienté vers le bas.
    - Ce climatiseur est affiché sur la télécommande.
    - Toutes les sorties sont fermées.
    - Appuyez sur la touche [RETOUR] et poursuivez l'opération depuis le début.
    - Les messages indiqués à gauche sont affichés. → L'appareil cible n'existe pas à cette adresse du réfrigérant.
  - Appuyez sur la touche [RETOUR] pour revenir à l'écran initial.



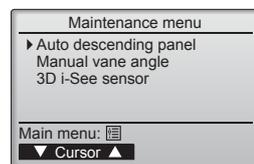
- 3 Sélectionnez le numéro suivant de l'"Ref. address" (Adresse réf.).
  - Reportez-vous à l'étape 1 pour changer l'"Ref. address" (Adresse réf.) et poursuivez la vérification.

### 3.6. Réglage du capteur 3D i-See

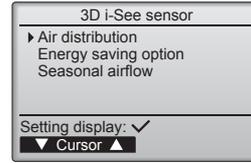
#### 3.6.1 Réglage du capteur 3D i-See



- 1 Sélectionnez "Maintenance" dans le menu général (reportez-vous à la page 40), et appuyez sur la touche [CHOIX].

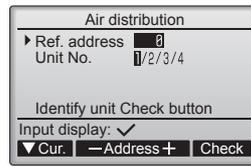


- 2 Sélectionnez "3D i-See sensor" (Capteur 3D i-See) à l'aide de la touche [F1] ou [F2], puis appuyez sur la touche [CHOIX].

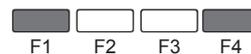
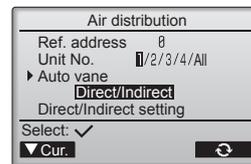


- 3 Sélectionnez le menu souhaité à l'aide de la touche [F1] ou [F2], puis appuyez sur la touche [CHOIX].
  - Air distribution (Distribution de l'air) Sélectionnez la méthode de contrôle du sens du flux d'air quand le sens du flux d'air est réglé sur "Auto".
  - Energy saving option (Option d'économie d'énergie) Fait fonctionner le mode d'économie d'énergie en fonction du taux d'occupation de la pièce détecté par le capteur 3D i-See.
  - Seasonal airflow (Flux d'air saisonnier) Quand le thermostat s'éteint, le ventilateur et les ailettes fonctionnent conformément aux réglages de commande.

#### 3.6.2 Distribution de l'air



- 1 Déplacez le curseur sur "Ref. address" (Adresse réf.) ou sur "Unit No." (No. Unité) avec la touche [F1] pour sélectionner. Sélectionnez l'adresse du réfrigérant et le numéro d'unité avec la touche [F2] ou [F3] pour les unités dont les ailettes doivent être réglées, puis appuyez sur la touche [CHOIX].
  - Ref. address (Adresse réf.) : Adresse du réfrigérant
  - Unit No. (No. Unité) : 1, 2, 3, 4 Appuyez sur la touche [F4] pour confirmer l'unité. Seule l'ailette de l'appareil intérieur cible est orientée vers le bas.



- 2 Sélectionnez le menu à l'aide de la touche [F4].
  - Default (Par défaut) → Area (Zone) → Direct/Indirect → Default... (Par défaut)

Default (Par défaut) : Les ailettes se déplacent de la même façon que pendant le fonctionnement normal.

En mode de refroidissement, toutes les ailettes se déplacent dans le sens d'un flux d'air horizontal.

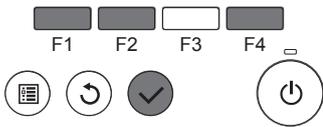
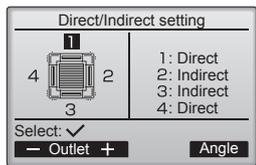
En mode de chauffage, toutes les ailettes se déplacent dans le sens d'un flux d'air vers le bas.

Area (Zone) : Les ailettes se déplacent dans le sens d'un flux d'air vers le bas vers les zones où la température du sol est élevée en mode de refroidissement, et vers les zones où la température du sol est basse en mode de chauffage. Sinon, les ailettes se déplacent dans le sens d'un flux d'air horizontal.

Direct/Indirect : Les ailettes se déplacent automatiquement en fonction des zones où la présence de personnes est détectée. Les ailettes fonctionnent comme indiqué dans le tableau suivant.

	Réglage de l'ailette	
	Direct	Indirect
Refroidissement	horizontal → balayage	reste horizontal
Chauffage	reste vers le bas	vers le bas → horizontal

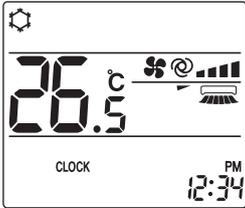
### 3. Fonctionnement



③ Quand Direct/Indirect est sélectionné, réglez chaque sortie d'air. Sélectionnez la sortie d'air à l'aide de la touche [F1] ou [F2], et changez le réglage à l'aide de la touche [F4].  
Après avoir modifié les réglages pour toutes les sorties d'air, appuyez sur la touche [CHOIX] pour enregistrer les réglages.

\* Pour pouvoir activer cette fonction, le sens du flux d'air doit être réglé sur "Auto".

#### ■ Touche i-See (télécommande sans fil)

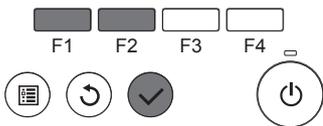
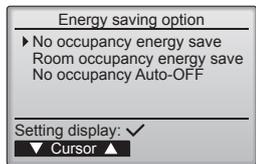


① À chaque fois que vous appuyez sur , le réglage change dans l'ordre suivant : ARRÊT → Direct → Indirect.

Affichage			
Réglage	ARRÊT	Direct	Indirect

Lorsque le réglage est modifié de ARRÊT à Direct ou Indirect, le réglage de l'ailette change en "Auto". Ce réglage est appliqué globalement à toutes les ailettes.

#### 3.6.3 Option d'économie d'énergie

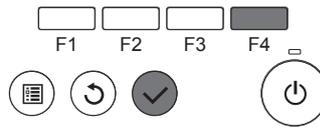
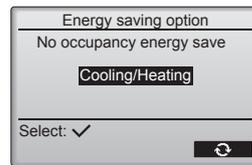


① Sélectionnez le menu voulu à l'aide de la touche [F1] ou [F2].

No occupancy energy save (Économie d'énergie si la pièce n'est pas occupée)  
Si personne ne se trouve dans la pièce pendant 60 minutes ou plus, une opération d'économie d'énergie égale à 2 °C s'effectue.

Room occupancy energy save (Économie d'énergie si la pièce est occupée)  
Si le taux d'occupation diminue jusqu'à atteindre environ 30 % du taux d'occupation maximum, une opération d'économie d'énergie égale à 1 °C s'effectue.

No occupancy Auto-OFF (Arrêt automatique si la pièce n'est pas occupée)  
Si personne ne se trouve dans la pièce pendant la durée prédéfinie (60–180 minutes), le fonctionnement s'arrête automatiquement.



② Quand No occupancy energy save (Économie d'énergie si la pièce n'est pas occupée) ou Room occupancy energy save (Économie d'énergie si la pièce est occupée) est sélectionné

Sélectionnez le réglage à l'aide de la touche [F4].

OFF (Arrêt) → Cooling only (Refroidissement uniquement) → Heating only (Chauffage uniquement) → Cooling/Heating (Refroidissement/chauffage) → OFF (Arrêt)...

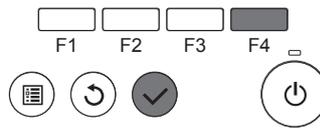
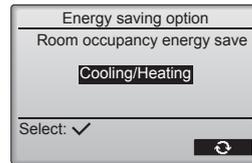
Une fois le réglage modifié, appuyez sur la touche [CHOIX] pour enregistrer le réglage.

OFF (Arrêt) : La fonction est désactivée.

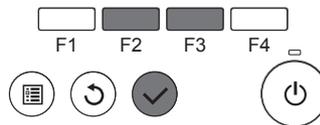
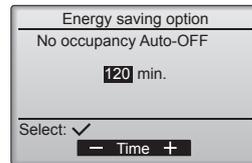
Cooling only (Refroidissement uniquement) : La fonction est activée uniquement pendant le mode de refroidissement.

Heating only (Chauffage uniquement) : La fonction est activée uniquement pendant le mode de chauffage.

Cooling/Heating (Refroidissement/chauffage) : La fonction est activée pendant les deux modes de refroidissement et de chauffage.

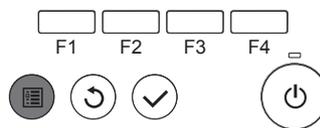
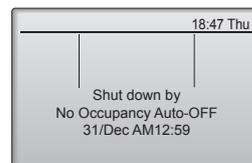


③ Quand No occupancy Auto-OFF (Arrêt automatique si la pièce n'est pas occupée) est sélectionné Réglez la durée à l'aide de la touche [F3] ou [F4].



-- : Le réglage est désactivé (le fonctionnement ne s'arrêtera pas automatiquement).

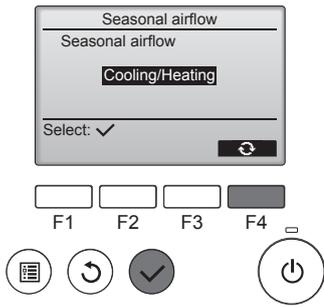
60–180 : La durée peut être réglée par paliers de 10 minutes.



④ Le message à gauche s'affiche si le fonctionnement a été arrêté automatiquement par le réglage No occupancy Auto-OFF (Arrêt automatique si la pièce n'est pas occupée).

## 3. Fonctionnement

### 3.6.4 Fonction Flux d'air saisonnier



- ① Sélectionnez le réglage à l'aide de la touche [F4].  
 OFF (Arrêt) → Cooling only (Refroidissement uniquement) → Heating only (Chauffage uniquement) → Cooling/Heating (Refroidissement/chauffage) → OFF (Arrêt)...

Une fois le réglage modifié, appuyez sur la touche [CHOIX] pour enregistrer le réglage.

OFF (Arrêt) : La fonction est désactivée.

Cooling only (Refroidissement uniquement) : Quand le thermostat s'éteint pendant le mode de refroidissement, les ailettes se déplacent vers le haut et vers le bas.

Heating only (Chauffage uniquement) : Quand le thermostat s'éteint pendant le mode de chauffage, les ailettes se placent dans le sens de flux d'air horizontal pour faire circuler l'air.

Cooling/Heating (Refroidissement/chauffage) : La fonction est activée pendant les deux modes de refroidissement et de chauffage.

- \* Pour pouvoir activer cette fonction, le sens du flux d'air doit être réglé sur "Auto".

#### Remarques :

Les personnes qui se trouvent aux endroits suivants ne peuvent pas être détectées.

- Le long du mur sur lequel le climatiseur est installé
- Juste sous le climatiseur
- Lorsque la personne est séparée du climatiseur par un obstacle quelconque, un meuble par exemple

Il est possible qu'une personne ne soit pas détectée dans les cas suivants.

- La température ambiante est élevée.
- La personne porte des vêtements épais et sa peau n'est pas exposée.
- Un élément chauffant dont un changement de température important est présent.
- Certaines sources de chaleur, telles qu'un petit enfant ou un animal domestique, peuvent ne pas être détectées.
- Une source de chaleur reste longtemps immobile.

Le capteur 3D i-See fonctionne une fois toutes les 3 minutes environ pour mesurer la température du sol et détecter les personnes présentes dans la pièce.

- Le bruit de fonctionnement intermittent est un son normal produit par le déplacement du capteur 3D i-See.
- La fonction Arrêt automatique pour pièce inoccupée n'est pas disponible lorsqu'une Télécommande MA est utilisée pour commander plusieurs systèmes de réfrigérant.

## 4. Minuterie

- Les fonctions de minuterie sont différentes pour chaque télécommande.

- Pour plus de détails sur le mode de fonctionnement de la télécommande, reportez-vous au manuel d'utilisation approprié fourni avec chaque télécommande.

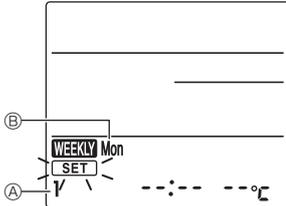


Fig. 1



Fig. 2



Fig. 3



Fig. 4

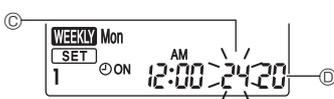


Fig. 5

#### Programme hebdomadaire (télécommande sans fil)

- Le programme hebdomadaire peut être défini pour quatre modèles de fonctionnement pour chaque jour de la semaine. Les réglages incluent les heures de mise en marche et d'arrêt et la température de consigne.

#### <Mode d'édition>

1. Passage en mode d'édition

- ① Appuyez sur la touche [EDIT] lorsque l'appareil fonctionne ou est à l'arrêt.  
 [SET] clignote. (Fig. 1)

2. Sélection du modèle de réglage

- ① Appuyez sur la touche [1~4] pour sélectionner le numéro du modèle de réglage.  
 À chaque fois que vous appuyez sur la touche [1~4], le numéro de modèle (A) change dans l'ordre suivant : 1 → 2 → 3 → 4.

3. Sélection du jour de la semaine

- ① Appuyez sur la touche [DAY] pour sélectionner le jour de la semaine à régler.  
 À chaque fois que vous appuyez sur la touche [DAY], le jour de la semaine (B) change dans l'ordre suivant : Mon (lundi) → Tue (mardi) → Wed (mercredi) → Thu (jeudi) → Fri (vendredi) → Sat (samedi) → Sun (dimanche) → All days (Tous les jours).

4. Sélection des paramètres de fonctionnement

- ① Appuyez sur la touche [ON/OFF] pour sélectionner le réglage marche ou arrêt. (Fig. 2)  
 ON (OFF) s'allume.  
 À chaque fois que vous appuyez sur la touche [ON/OFF], le réglage change dans l'ordre suivant : ON → OFF.

- ② Appuyez sur la touche [TIME] pour sélectionner l'heure de fonctionnement. (Fig. 3)

L'heure de fonctionnement clignote.  
 Réglez l'heure de fonctionnement à l'aide des touches [↑] [↓].

- L'heure de fonctionnement peut être réglée par paliers de 10 minutes.

- ③ Appuyez sur la touche [TEMP] pour sélectionner la température de consigne. (Fig. 4)

La température de consigne clignote.  
 Réglez la température à l'aide des touches [↑] [↓].

- Lors du réglage de la mise hors service, il n'est pas possible de régler la température.

Lorsque le mode AUTO (point de réglage double) est activé, appuyez sur la touche [TEMP] pour basculer entre la limite supérieure (C) et la limite inférieure (D). (Fig. 5)

- ④ Une pression sur la touche [DELETE] supprime les réglages du numéro de jour de la semaine affiché.

- ⑤ Répétez les étapes 2-4 pour sélectionner les réglages pour chaque jour de la semaine.

#### <Transmission des réglages>

Orientez la zone de transmission de la télécommande sans fil vers le récepteur de l'appareil intérieur et actionnez la télécommande. Assurez-vous que l'appareil intérieur émet 7 bips.

Appuyez sur la touche [SET].

#### <Activation du programme hebdomadaire>

Appuyez sur la touche [ON/OFF] [WEEKLY].

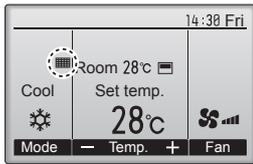
Le programme hebdomadaire est actif lorsque WEEKLY est allumé.

- Le programme hebdomadaire ne fonctionne pas lorsque la minuterie Marche/Arrêt est activée.

Le programme hebdomadaire fonctionne lorsque tous les réglages de la minuterie Marche/Arrêt ont été exécutés.

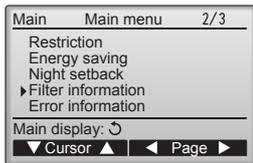
## 5. Entretien et nettoyage

### ■ Information filtre



Le filtre apparaît sur l'écran principal dans le mode complet quand les filtres doivent être nettoyés.

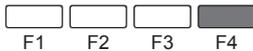
**Lavez, nettoyez ou remplacez les filtres lorsque cette icône apparaît. Veuillez vous référer au mode d'emploi de l'appareil intérieur pour plus de détails.**



Sélectionnez "Filter information" (Information filtre) dans le Menu général (voir page 40), et appuyez sur la touche [CHOIX].



Appuyez sur la touche [F4] pour réinitialiser le témoin d'état du filtre. Reportez-vous au mode d'emploi de l'appareil intérieur pour savoir comment nettoyer le filtre.



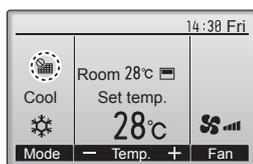
Choisissez "OK" avec la touche [F4].



Un écran de confirmation s'affiche.

**Naviguer dans les écrans**

- Pour revenir au Menu général ..... Touche [MENU]
- Pour revenir à l'écran précédent ..... Touche [RETOUR]



Lorsque le filtre est affiché sur l'écran principal en mode complet, le système est piloté de façon centralisée et le témoin d'état du filtre ne peut pas être remis à zéro.

Si deux ou plusieurs appareils intérieurs sont connectés, la fréquence de nettoyage du filtre de chaque appareil peut être différente, en fonction du type de filtre.

L'icône filtre s'affiche lorsque le filtre de l'appareil principale doit être nettoyé.

Lorsque le témoin d'état du filtre est remis à zéro, le temps de fonctionnement cumulé de tous les appareils est réinitialisé.

L'icône filtre doit apparaître après une certaine durée de fonctionnement, en fonction de l'hypothèse que les appareils intérieurs sont installés dans un espace avec une qualité d'air ordinaire. En fonction de la qualité de l'air, le filtre peut nécessiter un nettoyage plus fréquent. Le temps cumulé au bout duquel le filtre doit être nettoyé dépend du modèle.

• Cette indication n'est pas disponible pour la télécommande sans fil.

#### ⚠ Précaution :

• **Demander à une personne autorisée de nettoyer le filtre.**

#### ► Nettoyage des filtres

- Nettoyer les filtres avec un aspirateur. Si vous ne possédez pas d'aspirateur, battre les filtres contre un objet dur afin de les secouer et de retirer toutes les saletés et la poussière.
- Si les filtres sont particulièrement sales, les laver à l'eau tiède. Veiller à rincer soigneusement toute trace de détergent et laisser sécher les filtres complètement avant de les remonter dans le climatiseur.

#### ⚠ Précaution :

- **Ne jamais laisser sécher les filtres au soleil ni les sécher en utilisant une source de chaleur comme un chauffage électrique : vous risqueriez de les déformer.**
- **Ne jamais laver les filtres à l'eau chaude (au-dessus de 50°C) car vous risqueriez de les faire gondoler.**
- **Veiller à ce que les filtres à air soient toujours en place. La mise en marche de l'appareil alors que les filtres sont retirés pourrait en effet être à l'origine d'un mauvais fonctionnement.**

#### ⚠ Précaution :

- **Avant de commencer le nettoyage, arrêter l'appareil et couper l'alimentation.**
- **Les appareils intérieurs sont équipés de filtres servant à extraire les poussières de l'air aspiré. Nettoyer les filtres selon les méthodes illustrées ci-après.**

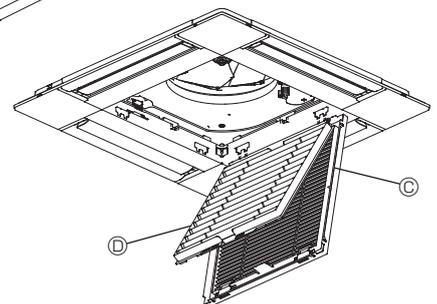
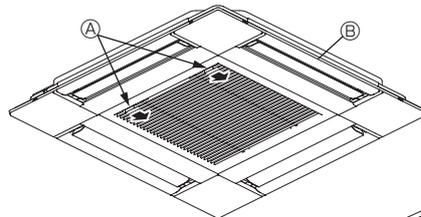
#### ► Retrait du filtre

#### ⚠ Précaution :

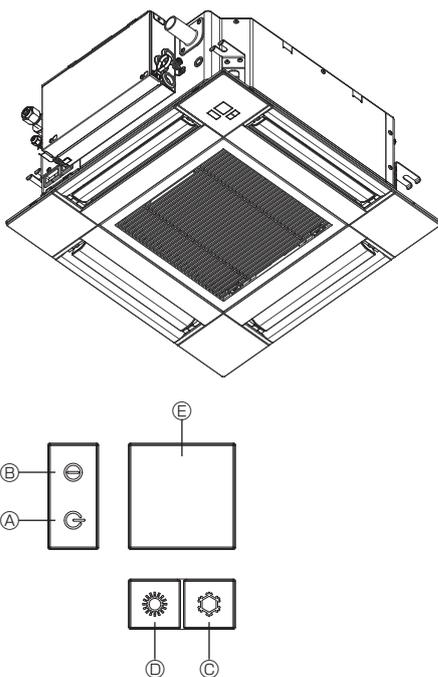
- **Lors du retrait du filtre, se protéger les yeux de la poussière. Si vous devez monter sur le rebord d'une fenêtre pour effectuer l'opération, attention de ne pas tomber.**
- **Une fois le filtre retiré, ne pas toucher les pièces métalliques internes de l'appareil intérieur sous peine de blessure.**

#### ■ SLZ-M-FA

- ① Faites glisser les leviers de la grille d'admission dans le sens indiqué par la flèche et elle devrait s'ouvrir.
- ② Ouvrir la grille d'aspiration.
- ③ Dégager le bouton situé au centre du bord de la grille d'aspiration et tirer le filtre vers l'avant pour l'extraire.
  - Ⓐ Leviers de la grille d'admission
  - Ⓑ Grille
  - Ⓒ Grille d'aspiration
  - Ⓓ Filtre



## 6. Fonctionnement d'urgence de la télécommande sans fil



### Lorsqu'il n'est pas possible d'utiliser la télécommande

Lorsque les piles de la télécommande sont usées ou lorsque la télécommande ne fonctionne pas correctement, vous pouvez activer le mode de fonctionnement d'urgence à l'aide des touches d'urgence situées sur la grille.

- Ⓐ Témoin DEFROST/STAND BY (dégivrage/veilleuse)
- Ⓑ Témoin de fonctionnement
- Ⓒ Interrupteur de fonctionnement de refroidissement d'urgence
- Ⓓ Interrupteur de fonctionnement de chauffage d'urgence
- Ⓔ Capteur

#### Opération de mise en marche

- Pour exécuter le mode de refroidissement, appuyez sur le bouton Ⓒ ☼ pendant plus de 2 secondes.
- Pour exécuter le mode de chauffage, appuyez sur le bouton Ⓓ ☼ pendant plus de 2 secondes.
- L'allumage du témoin de fonctionnement Ⓑ signifie que le fonctionnement a commencé.

#### Remarques :

- Les détails concernant le mode d'urgence sont tels qu'indiqués ci-dessous.

Les détails concernant le mode d'urgence sont tels qu'indiqués ci-dessous.

Mode de fonctionnement	FROID	CHAUD
Température définie	24°C	24°C
Vitesse de ventilateur	Élevé	Élevé
Direction du flux d'air	Horizontal	Vers le bas 4 (5)

#### Pour arrêter le fonctionnement

- Pour arrêter l'appareil, appuyez sur la touche Ⓒ ☼ ou sur la touche Ⓓ ☼ pendant plus de 2 secondes.

## 7. Guide de dépannage

En cas de problème :	Voici la solution. (L'appareil fonctionne normalement.)
Le climatiseur ne chauffe ni ne refroidit correctement.	<ul style="list-style-type: none"> <li>■ Nettoyez le filtre. (Le débit d'air est réduit lorsque le filtre est sale ou colmaté.)</li> <li>■ Contrôlez la température et ajustez la température définie en conséquence.</li> <li>■ Assurez-vous qu'il y a suffisamment d'espace autour de l'appareil extérieur. L'admission ou la sortie d'air de l'appareil intérieur est-elle bloquée ?</li> <li>■ Une porte ou une fenêtre a-t-elle été laissée ouverte ?</li> </ul>
Lorsque l'opération de chauffage débute, de l'air chaud n'est pas expulsé immédiatement de l'appareil intérieur.	<ul style="list-style-type: none"> <li>■ De l'air chaud est expulsé uniquement lorsque l'appareil intérieur est suffisamment chaud.</li> </ul>
En mode de chauffage, le climatiseur s'arrête avant que la température définie pour la pièce soit atteinte.	<ul style="list-style-type: none"> <li>■ Lorsque la température extérieure est basse et l'humidité de l'air importante, du givre peut se former sur l'appareil extérieur. Dans ce cas, l'appareil extérieur procède à une opération de dégivrage. Un fonctionnement normal de l'appareil devrait débiter au bout de 10 minutes environ.</li> </ul>
Pendant le mode de refroidissement, le climatiseur s'arrête dès que la température ambiante est atteinte.	<ul style="list-style-type: none"> <li>■ Pour la série SLZ-M-FA, dès que la température ambiante est atteinte en mode de refroidissement, le ventilateur fonctionne à la vitesse la plus basse.</li> </ul>
La direction du débit d'air varie pendant l'opération ou la direction ne peut être définie.	<ul style="list-style-type: none"> <li>■ En mode de chauffage, les ailettes se placent automatiquement en position horizontale lorsque la température du débit d'air est basse ou pendant le mode de dégivrage.</li> </ul>
Lorsque la direction du débit d'air est modifiée, les ailettes se déplacent toujours vers le haut et vers le bas au-delà de la position déterminée avant de s'arrêter sur la position souhaitée.	<ul style="list-style-type: none"> <li>■ Lorsque la direction du débit d'air est modifiée, les ailettes se placent sur la position déterminée après être passées par la position de base.</li> </ul>
Un bruit d'eau qui ruisselle ou plus rarement un souffle peut être perçu.	<ul style="list-style-type: none"> <li>■ Ces bruits peuvent être perçus lorsque le réfrigérant circule dans le climatiseur ou lorsque le flux du réfrigérant a été modifié.</li> </ul>
Un craquement ou un grincement peut être perçu.	<ul style="list-style-type: none"> <li>■ Ces bruits peuvent être perçus lorsque les pièces du climatiseur frottent les unes contre les autres en raison de l'expansion et de la contraction qui résultent des variations de température.</li> </ul>
La pièce a une odeur désagréable.	<ul style="list-style-type: none"> <li>■ L'appareil intérieur aspire de l'air qui contient des gaz produits par les murs, les moquettes et les meubles ainsi que des odeurs véhiculées par les vêtements, puis il les expulse à nouveau dans la pièce.</li> </ul>
Une buée ou vapeur blanche sort de l'appareil intérieur.	<ul style="list-style-type: none"> <li>■ Si la température intérieure et l'humidité de l'air sont élevées, cette situation peut se produire en début d'opération.</li> <li>■ En mode de dégivrage, de l'air froid peut être expulsé et avoir l'apparence de la buée.</li> </ul>
De l'eau ou de la vapeur sort de l'appareil extérieur.	<ul style="list-style-type: none"> <li>■ En mode de refroidissement, de l'eau peut se former et suinter des tuyaux et des raccords froids.</li> <li>■ En mode de chauffage, de l'eau peut se former et suinter de l'échangeur thermique.</li> <li>■ En mode de dégivrage, l'eau présent sur l'échangeur thermique s'évapore provoquant ainsi une émission de vapeur d'eau.</li> </ul>
Le signe "☼" apparaît sur l'écran de la télécommande.	<ul style="list-style-type: none"> <li>■ Lors du contrôle centralisé, le signe "☼" apparaît sur l'écran de la télécommande et le fonctionnement du climatiseur ne peut être lancé ou arrêté à l'aide de la télécommande.</li> </ul>
Lorsque le climatiseur est redémarré immédiatement après avoir été éteint, son fonctionnement est bloqué même si la touche "ON/OFF" (Marche/Arrêt) est sollicitée.	<ul style="list-style-type: none"> <li>■ Patientez trois minutes environ. (Le fonctionnement s'est arrêté pour protéger le climatiseur.)</li> </ul>

## 7. Guide de dépannage

En cas de problème :	Voici la solution. (L'appareil fonctionne normalement.)												
Le climatiseur fonctionne sans que la touche "ON/OFF" (Marche/Arrêt) soit sollicitée.	<ul style="list-style-type: none"> <li>La fonction de marche de la minuterie a-t-elle été réglée ? Appuyez sur la touche "ON/OFF" (Marche/Arrêt) pour l'arrêter.</li> <li>Le climatiseur est-il relié à une télécommande centralisée ? Veuillez consulter les personnes responsables du contrôle du climatiseur.</li> <li>Le signe "⏸" apparaît-il sur l'écran de la télécommande ? Veuillez consulter les personnes responsables du contrôle du climatiseur.</li> <li>La fonction de recouvrement auto en cas de coupure d'électricité a-t-elle été réglée ? Appuyez sur la touche "ON/OFF" (Marche/Arrêt) pour l'arrêter.</li> </ul>												
Le climatiseur s'arrête sans que la touche "ON/OFF" (Marche/Arrêt) soit sollicitée.	<ul style="list-style-type: none"> <li>La fonction d'arrêt de la minuterie a-t-elle été réglée ? Appuyez sur la touche "ON/OFF" (Marche/Arrêt) pour relancer l'opération.</li> <li>Le climatiseur est-il relié à une télécommande centralisée ? Veuillez consulter les personnes responsables du contrôle du climatiseur.</li> <li>Le signe "⏸" apparaît-il sur l'écran de la télécommande ? Veuillez consulter les personnes responsables du contrôle du climatiseur.</li> </ul>												
Le fonctionnement de la minuterie de la télécommande ne peut pas être réglé.	<ul style="list-style-type: none"> <li>Les paramètres de la minuterie sont-ils invalides ? Si la minuterie peut être réglée, les signes  ou  doivent apparaître sur l'écran de la télécommande.</li> </ul>												
Le message "PLEASE WAIT" (VEUILLEZ PATIENTER) apparaît sur l'écran de la télécommande.	<ul style="list-style-type: none"> <li>Les paramètres initiaux sont en cours d'exécution. Patientez trois minutes environ.</li> </ul>												
Un code d'erreur apparaît sur l'écran de la télécommande.	<ul style="list-style-type: none"> <li>Les dispositifs de protection ont fonctionné pour protéger le climatiseur.</li> <li>N'essayez pas de réparer cet appareil vous-même. Mettez l'appareil hors tension immédiatement et consultez votre revendeur. Vous devrez fournir au revendeur le nom du modèle et les informations qui apparaissent sur l'écran de la télécommande.</li> </ul>												
Un bruit de goutte à goutte ou de moteur qui tourne peut être perçu.	<ul style="list-style-type: none"> <li>A l'arrêt de l'opération de refroidissement, la pompe de vidange se met en marche puis s'arrête. Patientez 3 minutes environ.</li> </ul>												
Les ailettes ne bougent pas ou l'unité intérieure ne répond pas aux commandes de la télécommande sans fil.	<ul style="list-style-type: none"> <li>Les connecteurs des câbles de jonction du moteur du volet et du récepteur de signaux ne sont peut-être pas raccordés correctement. Faites vérifier les connexions par un installateur. (Les couleurs des sections mâle et femelle des connecteurs des câbles de jonction doivent correspondre.)</li> </ul>												
Le bruit perçu est supérieur aux caractéristiques sonores.	<ul style="list-style-type: none"> <li>Le niveau sonore du fonctionnement intérieur dépend de l'acoustique de la pièce dans laquelle l'appareil est installé (voir tableau suivant), et sera supérieur aux caractéristiques sonores (mesurées dans une pièce sans écho).</li> </ul> <table border="1"> <thead> <tr> <th></th> <th>Pièces présentant une absorption phonique élevée</th> <th>Pièces présentant une absorption phonique normale</th> <th>Pièces présentant une absorption phonique faible</th> </tr> </thead> <tbody> <tr> <td>Exemples de pièce</td> <td>Studio de radio-diffusion, salle de musique, etc.</td> <td>Salle de réception, entrée d'hôtel, etc.</td> <td>Bureau, chambre d'hôtel</td> </tr> <tr> <td>Niveaux sonores</td> <td>3 à 7 dB</td> <td>6 à 10 dB</td> <td>9 à 13 dB</td> </tr> </tbody> </table>		Pièces présentant une absorption phonique élevée	Pièces présentant une absorption phonique normale	Pièces présentant une absorption phonique faible	Exemples de pièce	Studio de radio-diffusion, salle de musique, etc.	Salle de réception, entrée d'hôtel, etc.	Bureau, chambre d'hôtel	Niveaux sonores	3 à 7 dB	6 à 10 dB	9 à 13 dB
	Pièces présentant une absorption phonique élevée	Pièces présentant une absorption phonique normale	Pièces présentant une absorption phonique faible										
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Niveaux sonores	3 à 7 dB	6 à 10 dB	9 à 13 dB										
Rien n'apparaît sur l'écran de la télécommande sans fil, l'écran est flou, ou l'appareil intérieur ne reçoit aucun signal sauf si la télécommande est éteinte.	<ul style="list-style-type: none"> <li>Les piles sont faibles. Remplacez les piles et appuyez sur la touche "Reset" (Réinitialiser).</li> <li>Si rien n'apparaît suite au remplacement des piles, assurez-vous que les piles sont insérées conformément à la polarité indiquée (+, -).</li> </ul>												
Le témoin de fonctionnement situé près du récepteur de la télécommande sans fil sur l'appareil intérieur clignote.	<ul style="list-style-type: none"> <li>La fonction d'auto-diagnostic a fonctionné pour protéger le climatiseur.</li> <li>N'essayez pas de réparer cet appareil vous-même. Mettez l'appareil hors tension immédiatement et consultez votre revendeur. Veuillez fournir au revendeur le nom du modèle.</li> </ul>												
La télécommande sans fil ne fonctionne pas (l'appareil intérieur émet 4 bips).	<ul style="list-style-type: none"> <li>Changez le réglage de mode automatique en mode AUTO (point de réglage unique) ou AUTO (point de réglage double). Pour plus d'informations, reportez-vous à la notice jointe (feuille A5) ou au manuel d'installation.</li> </ul>												

## 8. Installation, déplacement et inspection

### Conseils concernant l'emplacement

Évitez d'installer le climatiseur dans les endroits suivants.

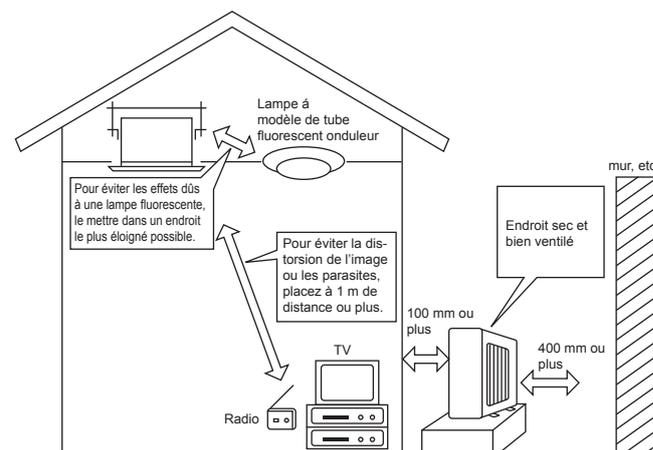
- Où il y a risque de fuite de gaz inflammable.

#### ⚠ Précaution :

**N'installez pas l'appareil dans un endroit où il pourrait y avoir une fuite de gaz combustible.**

**Si le gaz fuit et s'accumule autour de l'appareil, il y aura un risque d'explosion.**

- Où il y a grande quantité d'huile pour machines.
- Dans un endroit à haute teneur en sel, par exemple au bord de la mer.
- Près d'une source chaude émanant du soufre.
- Où il pourrait y avoir des éclaboussures d'huile ou de la fumée de graisse.



## 8. Installation, déplacement et inspection

### ⚠ Avertissement :

Si le climatiseur fonctionne sans refroidir ou sans chauffer la pièce (en fonction du modèle), contacter le revendeur car il pourrait alors y avoir une fuite de gaz réfrigérant. Toujours demander au représentant du service technique s'il n'y a pas de fuite de réfrigérant après une intervention technique.

Le réfrigérant présent dans le climatiseur est sûr et normalement il ne doit pas y avoir de fuite. Néanmoins, en cas de fuite à l'intérieur, si le gaz réfrigérant entre en contact avec la partie chauffante d'un chauffage à ventilation, d'un chauffage d'appoint, d'un poêle, etc., il dégagera des substances toxiques.

### Installation électrique

- Installez un circuit électrique réservé exclusivement au climatiseur.
- Respectez la capacité du disjoncteur.

### ⚠ Avertissement :

- Le client ne doit pas installer l'appareil. Si l'installation n'est pas effectuée correctement, il y aura risque d'incendie, de choc électrique, de blessure (si l'appareil tombe), de fuite d'eau, etc.
- N'utilisez pas de dérivation ou de rallonge pour le connecter, et ne branchez pas plusieurs appareils à la même prise. Un incendie ou un choc électrique pourrait être le résultat d'un mauvais contact, une mauvaise isolation, trop de courant, etc. Veuillez consulter votre concessionnaire.

### ⚠ Précaution :

- Mettez à la terre. Ne connectez pas un fil de mise à la terre à un tuyau de gaz, un tuyau d'eau, un paratonnerre ou au fil de mise à la terre d'un téléphone. Une mauvaise mise à la terre pourrait être la cause d'un choc électrique.
- Installez un disjoncteur différentiel selon l'endroit où le climatiseur sera installé (endroit humide, etc.) Si le disjoncteur différentiel n'est pas installé, il y aura risque de choc électrique.

### Inspection et entretien

- Quand le climatiseur est utilisé pendant plusieurs saisons, sa performance peut être amoindrie du fait de saletés se trouvant à l'intérieur de l'appareil.
- Suivant les conditions d'utilisation, il se peut qu'il y ait une odeur ou que l'eau accumulée durant l'assèchement ne s'évacue pas correctement à cause de la saleté, la poussière, etc.
- Il est recommandé de faire inspecter et réviser l'appareil (à vos frais) par un spécialiste en plus de l'entretien normal. Veuillez consulter votre concessionnaire.

### Bruit de l'appareil

- Ne placez pas d'objet près de la sortie d'air de l'appareil extérieur. Cela pourrait en amoindrir la performance ou augmenter le bruit durant le fonctionnement.
- Si un bruit anormal est entendu pendant la marche, veuillez consulter votre concessionnaire.

### Entsorgung

- Quand le climatiseur doit être enlevé ou réinstallé à cause de travaux, d'un déménagement, etc., cela doit être fait par un technicien qualifié.

### ⚠ Avertissement :

Le client ne doit pas réparer ou déplacer l'appareil lui-même.

Si cela est fait incorrectement, il y aura risque d'incendie, de choc électrique, de blessure (si l'appareil tombe), de fuite d'eau, etc. Veuillez consulter votre concessionnaire.

### Pour s'en débarrasser

- Pour jeter ce produit, veuillez consulter votre concessionnaire.

Si vous avez d'autres questions, veuillez consulter votre concessionnaire.

## 9. Spécifications techniques

Modèle	SLZ-M15FA	SLZ-M25FA	SLZ-M35FA	SLZ-M50FA	SLZ-M60FA
Alimentation principale (Tension <V>, Fréquence<Hz>)	~N, 230V, 50Hz				
Puissance Absorbée Normale (Intérieur uniquement) <kW>	0,02	0,02	0,02	0,03	0,04
Courant Assigné (Intérieur uniquement) <A>	0,17	0,20	0,24	0,32	0,43
Dimensions (Hauteur) <mm>	245 (10)				
Dimensions (Largeur) <mm>	570 (625)				
Dimensions (Profondeur) <mm>	570 (625)				
Débit de la soufflerie (Faible-Moyenne-Elevé) <m³/min>	6,0 - 6,5 - 7,0	6,5 - 7,5 - 8,5	6,5 - 8,0 - 9,5	7,0 - 9,0 - 11,5	7,5 - 11,5 - 13,0
Niveau de bruit (Faible-Moyenne-Elevé) <dB>	24 - 26 - 28	25 - 28 - 31	25 - 30 - 34	27 - 34 - 39	32 - 40 - 43
Poids net <kg>	15 (3)				

Remarques : 1. Ce chiffre ( ) indique les grilles.

2. Spécifications sujettes à modifications sans avis préalable.

### Fourchette de fonctionnement garantie

		A l'intérieur	A l'extérieur
Refroidissement	Maximum	32°C DB, 23°C WB	46°C DB, –
	Minimum	21°C DB, 15°C WB	-10°C DB, – / -15°C DB, -*1
Chauffage	Maximum	27°C DB, –	24°C DB, 18°C WB
	Minimum	20°C DB, –	-10°C DB, -11°C WB

\*1 Selon l'unité extérieure.

Les appareils doivent être installés par un électricien professionnel agréé en fonction des normes locales.

EC DECLARATION OF CONFORMITY  
EG-KONFORMITÄTSEKHLÄRUNG  
DÉCLARATION DE CONFORMITÉ CE  
EG-CONFORMITEITSVERKLARING

DECLARACIÓN DE CONFORMIDAD CE  
DICHIARAZIONE DI CONFORMITÀ CE  
ΔΗΛΩΣΗ ΠΙΣΤΟΤΗΤΑΣ ΕΚ  
DECLARAÇÃO DE CONFORMIDADE CE

EU-OVERENSSTEMMELSEERKLÆRING  
EG-DEKLARATION OM ÖVERENSSTÄMMELSE  
EC UYGUNLUK BEYANI

ДЕКЛАРАЦИЯ СООТВЕТСТВИЯ НОРМАМ ЕС  
CE-ERKLÆRING OM SAMSVAR  
DEKLARACJA ZGODNOŚCI WE

**MITSUBISHI ELECTRIC CONSUMER PRODUCTS (THAILAND) CO., LTD.**  
**AMATA NAKORN INDUSTRIAL ESTATE 700/406 MOO 7, TAMBON DON HUA ROH, AMPHUR MUANG, CHONBURI 20000, THAILAND**

hereby declares under its sole responsibility that the air conditioners and heat pumps described below for use in residential, commercial and light-industrial environments:  
erklært hermit auf seine alleinige Verantwortung, dass die Klimaanlage und Wärmepumpen für das häusliche, kommerzielle und leicht-industrielle Umfeld wie unten beschrieben:  
déclare par la présente et sous sa propre responsabilité que les climatiseurs et les pompes à chaleur décrits ci-dessous, destinés à un usage dans des environnements résidentiels, commerciaux et d'industrie légère :  
verklaart hierbij onder eigen verantwoordelijkheid dat de voor residentiële, commerciële en licht-industriële omgevingen bestemde airconditioners en warmtepompen zoals onderstaand beschreven:  
por la presente declara bajo su única responsabilidad que los acondicionadores de aire y bombas de calor descritas a continuación para su uso en entornos residenciales, comerciales y de industria ligera:  
conferma con la presente, sotto la sua esclusiva responsabilità, che i condizionatori d'aria e le pompe di calore descritti di seguito e destinati all'utilizzo in ambienti residenziali, commerciali e semi-industriali:  
με το παρόν πιστοποιεί με αποκλειστική της ευθύνη ότι οι τα κλιματιστικά και οι αντλίες θέρμανσης που περιγράφονται παρακάτω για χρήση σε οικιακό, επαγγελματικό και ελαφριάς βιομηχανίας περιβάλλοντα:  
através da presente declara sob sua única responsabilidade que os aparelhos de ar condicionado e bombas de calor abaixo descritos para uso residencial, comercial e de indústria ligeira:  
erklærer hermed under eneansvar, at de herunder beskrevne airconditionanlæg og varmepumper til brug i privat boligbyggeri, erhvervsområder og inden for let industri:  
intygar härmed att luftkonditioneringarna och varmepumparna som beskrivs nedan för användning i bostäder, kommersiella miljöer och lätta industriella miljöer:  
ev, ticaret ve hafif sanayi ortamlarında kullanılmaya elverişli üretilen ve aşağıda açıklanan klima ve ısıtma pompalarıyla ilgili aşağıdaki hususları yalnızca kendi sorumluluğunda beyan eder:  
настоящим заявляет и берет на себя исключительную ответственность за то, что кондиционеры и тепловые насосы, описанные ниже и предназначенные для эксплуатации в жилых помещениях, торговых залах и на предприятиях легкой промышленности:  
erklærer et fullstendig ansvar for undernevnte klimaanlegg og varmepumper ved bruk i boliger, samt kommersielle og lettindustrielle miljøer:  
niniejszym oświadczam na swoją wyłączną odpowiedzialność, że klimatyzatory i pompy ciepła opisane poniżej, są przeznaczone do zastosowań w środowisku mieszkalnym, handlowym i lekko przemysłowym:

**MITSUBISHI ELECTRIC, SLZ-M15FA\*, SLZ-M25FA\*, SLZ-M35FA\*, SLZ-M50FA\*, SLZ-M60FA\***  
\* : , , 1, 2, 3, . . . , 9

Note: Its serial number is on the nameplate of the product.  
Hinweis: Die Seriennummer befindet sich auf dem Kennschild des Produkts.  
Remarque : Le numéro de série de l'appareil se trouve sur la plaque du produit.  
Opmerking: het serienummer staat op het naamplaatje van het product.  
Nota: El número de serie se encuentra en la placa que contiene el nombre del producto.  
Nota: il numero di serie si trova sulla targhetta del prodotto.  
Σημείωση: Ο σειριακός του αριθμός βρίσκεται στην πινακίδα ονόματος του προϊόντος.

Nota: o número de série encontra-se na placa que contém o nome do produto.  
Bemærk: Serienummeret står på produktets fabriksskilt.  
Obs: Serienumret finns på produktens namnplåt.  
Not: Seri numarasi ürünün isim plakasında yer alır.  
Примечание: серийный номер указан на паспортное табличке изделия.  
Merk: Serienummeret befinnet seg på navneplaten til produktet.  
Uwaga: Numer seryjny znajduje się na tabliczce znamionowej produktu.

Directives  
Richtlijnen  
Directives  
Richtlijnen  
Directivas  
Direttive  
Οδηγίες  
Directivas  
Direktiver  
Direktiv  
Direktifler  
Директивы  
Direktiver  
Dyrektywy

2014/35/EU: Low Voltage  
2006/42/EC: Machinery  
2014/30/EU: Electromagnetic Compatibility  
2009/125/EC: Energy-related Products  
2011/65/EU: RoHS Directive

Issued: 1 Nov. 2017  
THAILAND

Akira HIDAKA  
Manager, Quality Assurance Department

Revised date:

THAILAND

## <ENGLISH>

English is original. The other languages versions are translation of the original.

### ⚠ CAUTION

- Refrigerant leakage may cause suffocation. Provide ventilation in accordance with EN378-1.
- Be sure to wrap insulation around the piping. Direct contact with the bare piping may result in burns or frostbite.
- Never put batteries in your mouth for any reason to avoid accidental ingestion.
- Battery ingestion may cause choking and/or poisoning.
- Install the unit on a rigid structure to prevent excessive operation sound or vibration.
- Noise measurement is carried out in accordance with JIS C9612, JIS B8616, ISO 5151(T1), and ISO 13523(T1).

## <DEUTSCH>

Das Original ist in Englisch. Die anderen Sprachversionen sind vom Original übersetzt.

### ⚠ VORSICHT

- Das Auslaufen von Kältemittel kann zu Erstickung führen. Sorgen Sie für Belüftung gemäß der Bestimmung EN378-1.
- Sicherstellen, dass die Rohrführung isoliert ist. Direkter Kontakt mit der blanken Rohrführung kann zu Verbrennungen oder Erfrierung führen.
- Nehmen Sie unter keinen Umständen Batterien in den Mund, um versehentliches Verschlucken zu vermeiden.
- Das Verschlucken von Batterien kann zu Erstickung und/oder Vergiftung führen.
- Installieren Sie das Gerät an einer stabilen Struktur, um übermäßige Betriebsgeräusche oder Vibration zu vermeiden.
- Geräuschmessungen werden gemäß der Bestimmungen JIS C9612, JIS B8616, ISO 5151(T1), und ISO 13523(T1) ausgeführt.

## <FRANÇAIS>

L'anglais est l'original. Les versions fournies dans d'autres langues sont des traductions de l'original.

### ⚠ PRECAUTION

- Une fuite de réfrigérant peut entraîner une asphyxie. Fournissez une ventilation adéquate en accord avec la norme EN378-1.
- Assurez-vous que la tuyauterie est enveloppée d'isolant. Un contact direct avec la tuyauterie nue peut entraîner des brûlures ou des engelures.
- Ne mettez jamais des piles dans la bouche pour quelque raison que ce soit pour éviter de les avaler par accident.
- Le fait d'ingérer des piles peut entraîner un étouffement et/ou un empoisonnement.
- Installez l'unité sur une structure rigide pour prévenir un bruit de fonctionnement et une vibration excessifs.
- Les mesures de niveau sonore ont été effectuées en accord avec les normes JIS C9612, JIS B8616, ISO 5151(T1) et ISO 13523(T1).

## <NEDERLANDS>

Het Engels is het origineel. De andere taalversies zijn vertalingen van het origineel.

### ⚠ VOORZICHTIG

- Het lekken van koelstof kan verstikking veroorzaken. Zorg voor ventilatie in overeenstemming met EN378-1.
- Isoleer de leidingen met isolatiemateriaal. Direct contact met de onbedekte leidingen kan leiden tot brandwonden of bevriezing.
- Stop nooit batterijen in uw mond om inslikking te voorkomen.
- Het inslikken van batterijen kan verstikking of vergiftiging veroorzaken.
- Installeer het apparaat op een stabiele structuur om overmatig lawaai of trillingen te voorkomen.
- Geluidsmetingen worden uitgevoerd in overeenstemming met JIS C9612, JIS B8616, ISO 5151(T1), en ISO 13523(T1).

## <ESPAÑOL>

El idioma original del documento es el inglés. Las versiones en los demás idiomas son traducciones del original.

### ⚠ CUIDADO

- Las pérdidas de refrigerante pueden causar asfixia. Se debe proporcionar la ventilación determinada en EN378-1.
- Asegúrese de colocar el aislante alrededor de las tuberías. El contacto directo con la tubería puede ocasionar quemaduras o congelación.
- Para evitar una ingestión accidental, no coloque las pilas en su boca bajo ningún concepto.
- La ingestión de las pilas puede causar asfixia y/o envenenamiento.
- Coloque la unidad en una estructura rígida para evitar que se produzcan sonidos o vibraciones excesivos debidos a su funcionamiento.
- La medición de los ruidos se lleva a cabo de acuerdo con JIS C9612, JIS B8616, ISO 5151(T1) y ISO 13523(T1).

## <ITALIANO>

Il testo originale è redatto in lingua Inglese. Le altre versioni linguistiche rappresentano traduzioni dell'originale.

### ⚠ ATTENZIONE

- Perdite di refrigerante possono causare asfissia. Prevedere un ventilazione adeguata in conformità alla norma EN378-1.
- Accertarsi di applicare materiale isolante intorno alle tubature. Il contatto diretto con le tubature non schermate può provocare ustioni o congelamento.
- Non introdurre in nessun caso le batterie nella bocca onde evitare ingestioni accidentali.
- L'ingestione delle batterie può provocare soffocamento e/o avvelenamento.
- Installare l'unità su di una struttura rigida in modo da evitare rumore o vibrazioni eccessivi durante il funzionamento.
- La misurazione del rumore viene effettuata in conformità agli standard JIS C9612, JIS B8616, ISO 5151(T1) e ISO 13523(T1).

## <ΕΛΛΗΝΙΚΑ>

Η γλώσσα του πρωτοτύπου είναι η αγγλική. Οι εκδόσεις άλλων γλωσσών είναι μεταφράσεις του πρωτοτύπου.

### ⚠ ΠΡΟΣΟΧΗ

- Η διαρροή του ψυκτικού ενδέχεται να προκαλέσει ασφυξία. Φροντίστε για τον εξαερισμό σύμφωνα με το EN378-1.
- Βεβαιωθείτε ότι τυλίξατε με μονωτικό υλικό τη σωλήνωση. Η απευθείας επαφή με τη γυμνή σωλήνωση ενδέχεται να προκαλέσει εγκαύματα ή κρυοπαγήματα.
- Μην βάζετε ποτέ τις μπαταρίες στο στόμα σας για κανένα λόγο ώστε να αποφύγετε την κατά λάθος κατάποσή τους.
- Η κατάποση μπαταριών ενδέχεται να προκαλέσει πνιγμό και/ή δηλητηρίαση.
- Εγκαταστήστε τη μονάδα σε σταθερή κατασκευή ώστε να αποφύγετε τον έντονο ήχο λειτουργίας ή τους κραδασμούς.
- Η μέτρηση του θορύβου πραγματοποιήθηκε σύμφωνα με τα JIS C9612, JIS B8616, ISO 5151(T1) και ISO 13523(T1).

## <PORTUGUÊS>

O idioma original é o inglês. As versões em outros idiomas são traduções do idioma original.

### ⚠ CUIDADO

- As fugas de refrigerante podem provocar asfixia. Proporcione ventilação de acordo com a EN378-1.
- Certifique-se de que coloca isolamento em redor da tubagem. O contacto directo com a tubagem pode resultar em queimaduras ou úlceras causadas pelo frio.
- Para evitar uma ingestão accidental, nunca coloque pilhas na boca.
- A ingestão das pilhas pode provocar asfixia e/ou envenenamento.
- Instale a unidade numa estrutura rígida para evitar vibrações ou ruídos excessivos durante o seu funcionamento.
- A medição dos ruídos é efectuada de acordo com a JIS C9612, JIS B8616, ISO 5151(T1), e ISO 13523(T1).

## <DANSK>

Engelsk er originalen. De andre sprogversioner er oversættelser af originalen.

### ⚠ FORSIGTIG

- Kølemiddellækage kan forårsage kvælning. Sørg for ventilation i henhold til EN378-1.
- Der skal altid vikles isolering omkring rørene. Direkte kontakt med blottagte rør kan medføre forbrænding eller forfrysning.
- Put aldrig batterier i munden uanset årsag, du kan komme til at sluge dem.
- Hvis batterier sluges, kan det medføre kvælning og/eller forgiftning.
- Monter enheden på en fast struktur, så kraftig lyd og vibration undgås.
- Støjmåling udføres i henhold til JIS C9612, JIS B8616, ISO 5151(T1) og ISO 13523(T1).

## <SVENSKA>

Engelska är originalspråket. De övriga språkversionerna är översättningar av originalet.

### ⚠ FÖRSIKTIGHET

- Kölmedelsläckage kan leda till kvävning. Tillhandahåll ventilation i enlighet med EN378-1.
- Kom ihåg att linda isolering runt rören. Direktkontakt med bara rör kan leda till brännskador eller köldskador.
- Stoppa aldrig batterier i munnen, de kan sväljas av misstag.
- Om ett batteri sväljs kan det leda till kvävning och/eller förgiftning.
- Montera enheten på ett stadigt underlag för att förhindra höga driftljud och vibrationer.
- ljudmätningar har utförts i enlighet med JIS C9612, JIS B8616, ISO 5151(T1) och ISO 13523(T1).

## <TÜRKÇE>

Aslı İngilizce'dir. Diğer dillerdeki sürümler aslının çevirisidir.

### ⚠ DİKKAT

- Soğutucu sızıntısı boğulma tehlikesine yol açabilir. EN378-1'e göre havalandırma sağlayın.
- Boruların etrafına izolasyon malzemesi kaplamayı unutmayın. Çıplak boruya doğrudan temas etmek yanmaya ve soğuk ısırmasına neden olabilir.
- Yanlışlıkla yutmamak için pilleri hiçbir nedenle asla ağzınıza sokmayın.
- Pili yutmak boğulmaya ve/veya zehirlenmeye neden olabilir.
- Aşırı çalışma sesinin veya titreşimin oluşmaması için üniteyi sert bir yapı üzerine kurun.
- Ses ölçümü JIS C9612, JIS B8616, ISO 5151(T1), ve ISO 13523(T1) standartlarına göre yapılır.

## <РУССКИЙ>

Языком оригинала является английский. Версии на других языках являются переводом оригинала.

### ⚠ ОСТОРОЖНО

- Утечка хладагента может стать причиной удушья. Обеспечьте вентиляцию в соответствии с EN378-1.
- Обязательно оберните трубы изоляционной обмоткой. Непосредственный контакт с неизолированным трубопроводом может привести к ожогам или обморожению.
- Запрещается класть элементы питания в рот по каким бы то ни было причинам во избежание случайного проглатывания.
- Попадание элемента питания в пищеварительную систему может стать причиной удушья и/или отравления.
- Устанавливайте устройство на жесткую структуру во избежание чрезмерного шума или чрезмерной вибрации во время работы.
- Измерение шума выполняется в соответствии с JIS C9612, JIS B8616, ISO 5151(T1) и ISO 13523(T1).

## <NORSK>

Originalspråket er engelsk. De andre språkversjonene er oversettelser av originalen.

### ⚠ FORSIKTIG

- Kjølemiddellekkasje kan forårsake kvælning. Sørg for ventilering i samsvar med EN378-1.
- Pass på at isoleringen pakkes godt rundt røret. Direkte kontakt med ukledte rør kan forårsake brannskader eller forfrysninger.
- Aldri plasser batteri i munnen, da dette kan medføre en risiko for at du svelger batteriet ved et uheld.
- Hvis du svelger et batteri, kan du risikere kvælning og/eller forgiftning.
- Installer enheten på en stabil struktur for å forhindre unødvendig mye driftsstøy eller vibrering.
- Støymålinger er utført i samsvar med JIS C9612, JIS B8616, ISO 5151(T1) og ISO 13523(T1).

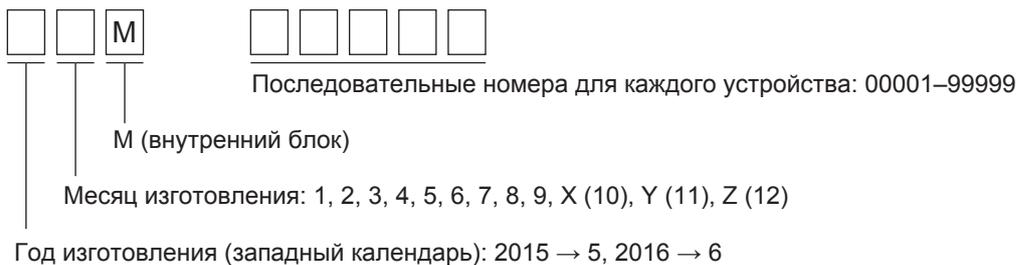
## <POLSKI>

Językiem oryginalu jest język angielski. Inne wersje językowe stanowią tłumaczenie oryginalu.

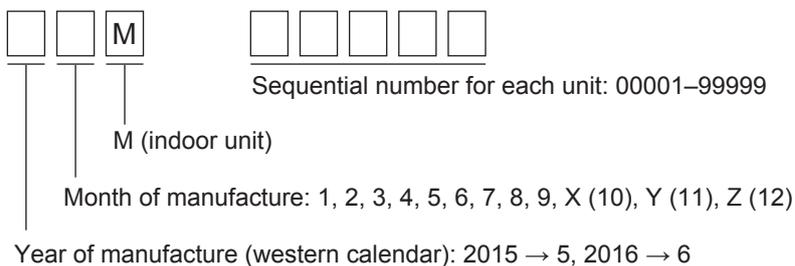
### ⚠ UWAGA

- Wyciek czynnika chłodniczego może spowodować uduszenie. Należy zapewnić wentylację zgodnie z normą EN378-1.
- Należy pamiętać, aby owinąć izolację wokół przewodów rurowych. Bezpośredni kontakt z niezabezpieczonymi przewodami rurowymi może doprowadzić do poparzeń lub odmrożeń.
- Nie wolno wkładać baterii do ust z jakiegokolwiek powodu, aby uniknąć przypadkowego poknięcia.
- Połknięcie baterii może spowodować zadławienie i/lub zatrucie.
- Zainstalować urządzenie na sztywnej konstrukcji, aby zapobiec nadmiernemu hałasowi i wibracjom.
- Pomiar hałasu należy przeprowadzać zgodnie z normami JIS C9612, JIS B8616, ISO 5151(T1) i ISO 13523(T1).

■ **Серийный номер указан на заводской табличке спецификации.**



■ **The serial number is indicated on the SPEC NAME PLATE.**



This product is designed and intended for use in the residential, commercial and light-industrial environment.

**Importer:**

Mitsubishi Electric Europe B.V.  
Capronilaan 46, 1119 NS, Schiphol Rijk, The Netherlands

French Branch  
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German Branch  
Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany

Belgian Branch  
Autobaan 2, 8210 Loppem, Belgium

Irish Branch  
Westgate Business Park, Ballymount, Dublin 24, Ireland

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Norwegian Branch  
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Portuguese Branch  
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Spanish Branch  
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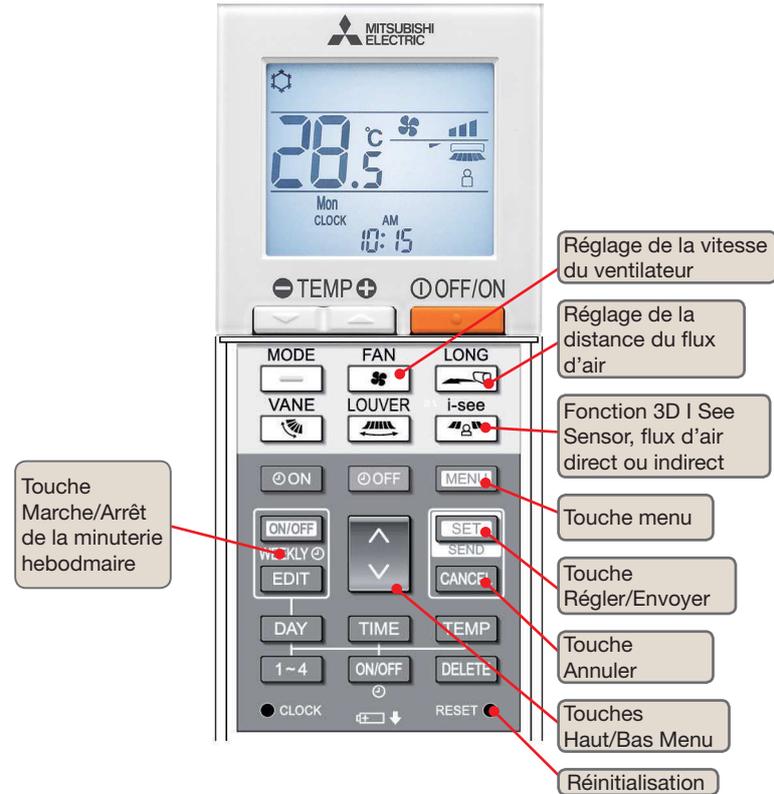
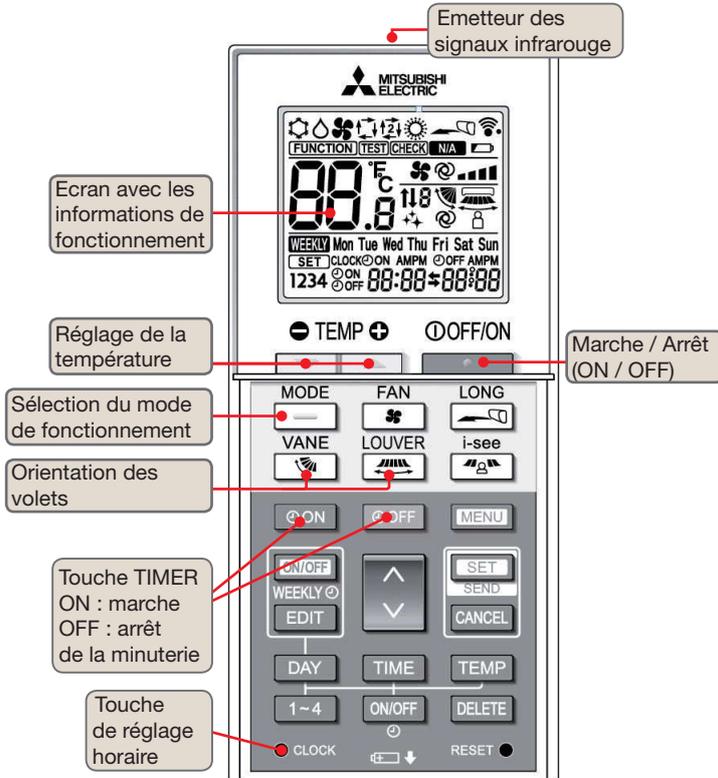
MITSUBISHI ELECTRIC (RUSSIA) LLC  
115114, Russia, Moscow, Letnikovskaya street 2, bld.1, 5th

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

Не забудьте указать контактный адрес/номер телефона в данном руководстве, прежде чем передать его клиенту.

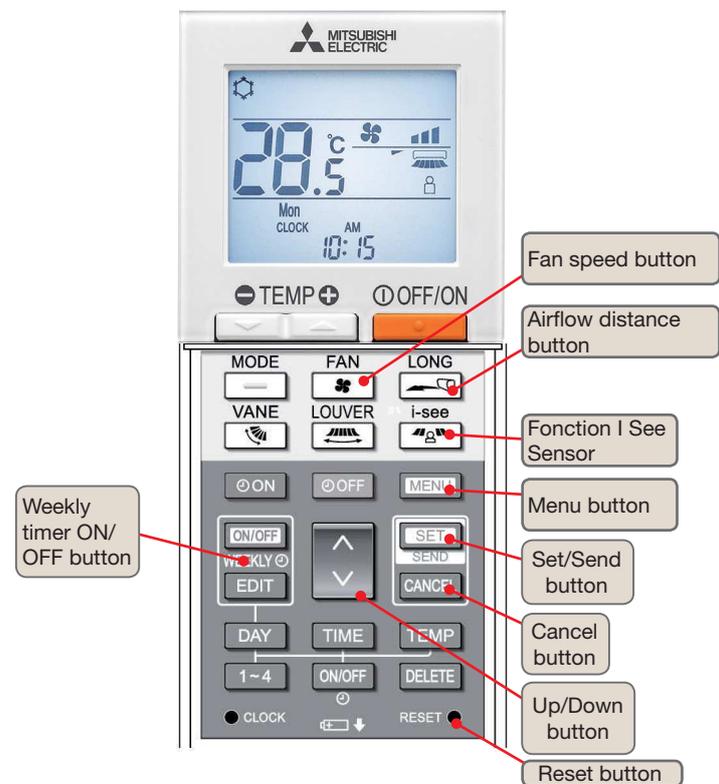
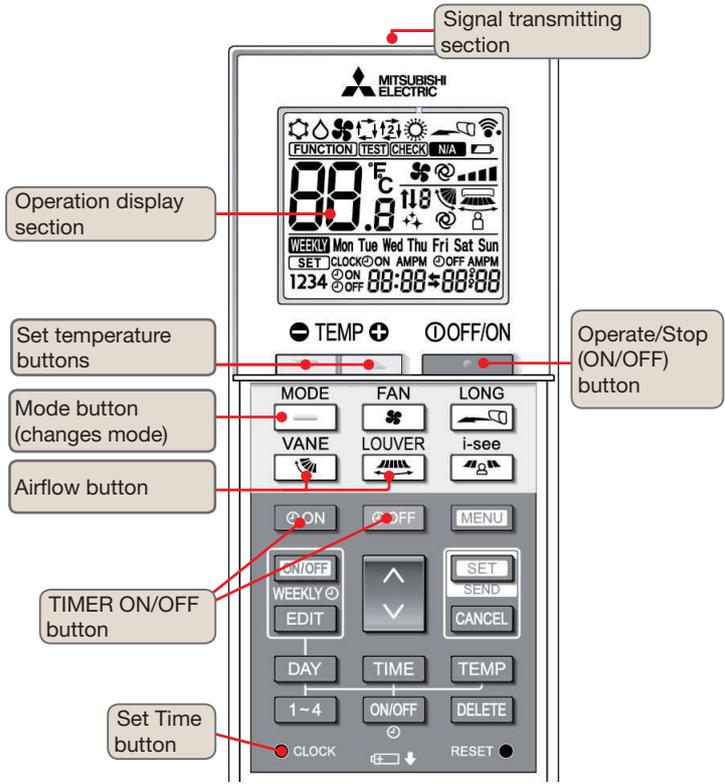
**MITSUBISHI ELECTRIC CORPORATION**

HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN



### Modes de fonctionnement

- Froid
- Chaud
- Déshu.
- Ventil.
- Auto (point de réglage unique)
- Auto (point de réglage double)



Operation modes

Cool 
 Heat 
 Dry 
 Fan

Auto (single point) 
 Auto (dual set point)

## OUTDOOR UNIT

# SERVICE MANUAL



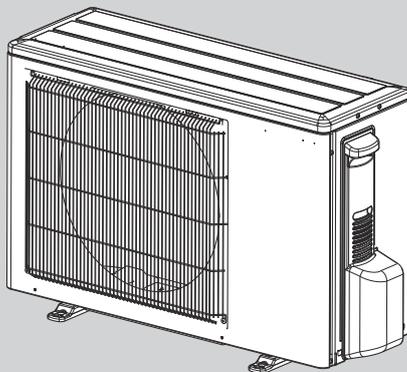
No. OBH823

### Models

<b>MUZ-HR25VF</b>	-	<b>E1</b>	,	<b>ER1</b>	,	<b>ET1</b>
<b>MUZ-HR35VF</b>	-	<b>E1</b>	,	<b>ER1</b>	,	<b>ET1</b>
<b>MUZ-HR42VF</b>	-	<b>E1</b>	,	<b>ER1</b>	,	<b>ET1</b>
<b>MUZ-HR50VF</b>	-	<b>E1</b>	,	<b>ER1</b>	,	<b>ET1</b>

Indoor unit service manual  
MSZ-HR·VF Series (OBH822)

MUZ-HR42VF  
MUZ-HR50VF



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**PARTS CATALOG (OBB823)**

## 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 in the manuals and on the spec labels provided with our products.

We will not be held responsible for mechanical failure, system malfunction, unit breakdown or accidents caused by failure to follow the instructions.

#### <Preparation before the repair service>

- Prepare the proper tools.
- Prepare the proper protectors.
- Provide adequate ventilation.
- After stopping the operation of the air conditioner, turn off the power-supply breaker and remove the power plug.
- Discharge the capacitor before the work involving the electric parts.

#### <Precautions during the repair service>

- Do not perform the work involving the electric parts with wet hands.
- Do not pour water into the electric parts.
- Do not touch the refrigerant.
- Do not touch the hot or cold areas in the refrigeration cycle.
- When the repair or the inspection of the circuit needs to be done without turning off the power, exercise great caution not to touch the live parts.

## 1

## TECHNICAL CHANGES

**MUZ-HR25VF** -  E1,  ER1,  ET1

**MUZ-HR35VF** -  E1,  ER1,  ET1

**MUZ-HR42VF** -  E1,  ER1,  ET1

**MUZ-HR50VF** -  E1,  ER1,  ET1

1. New model

### Servicing precautions for units using refrigerant R32



This unit uses a flammable refrigerant.

If refrigerant leaks and comes in contact with fire or heating part, it will create harmful gas and there is risk of fire.

- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.)
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odor.
- Pipe-work shall be protected from physical damage.
- The installation of pipe-work shall be kept to a minimum.
- Compliance with national gas regulations shall be observed.
- Keep any required ventilation openings clear of obstruction.
- Servicing shall be performed only as recommended by the manufacturer.
- The appliance shall be stored so as to prevent mechanical damage from occurring.

**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 Checks on the Area
 

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized.
  - ② Work Procedure
 

Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor being present while the work is being performed.
  - 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. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.
  - 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. non-sparking, adequately sealed or intrinsically safe.
  - ⑤ Presence of Fire Extinguisher
 

If any hot work is to be conducted on the refrigeration 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.
  - ⑥ No Ignition Sources
 

No person carrying out work in relation to a refrigeration 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.
  - 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.
  - ⑧ Checks on the Refrigeration 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 charge size 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.
    - If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant.
    - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.
    - Refrigeration 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 corroded.
  - ⑨ Checks on 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;
    - no live electrical components and wiring are exposed while charging, recovering or purging the system;
    - there is continuity of earth bonding
2. Repairs to Sealed Components
  - ① During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
  - ② Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
 

Ensure that the apparatus is mounted securely.

Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.
3. Repair to intrinsically Safe Components
 

Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.

Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.

Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.
4. Cabling
 

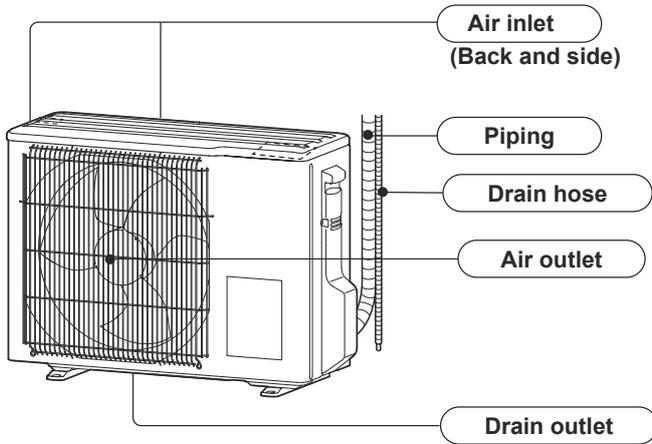
Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

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.
6. **Leak Detection Methods**  
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 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. For appliances containing flammable refrigerants, oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.
7. **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 is followed since flammability is a consideration. The following procedure shall be adhered to:
- remove refrigerant
  - purge the circuit with inert gas
  - evacuate
  - purge again with inert gas
  - open the circuit by cutting or brazing.
- The refrigerant charge shall be recovered into the correct recovery cylinders. For appliances containing flammable refrigerants, the system shall be "flushed" with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.  
For appliances containing flammable refrigerants, flushing shall be achieved by breaking the vacuum in the system with OFN 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 OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.  
Ensure that the outlet for the vacuum pump is not close to any ignition sources and that ventilation is available.
8. **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 upright.
  - Ensure that the refrigeration 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 refrigeration 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.
9. **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 reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.
- 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 manufacturer's 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 refrigeration system unless it has been cleaned and checked.
10. **Labeling**  
Equipment shall be labeled 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.
11. **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 are available. All cylinders to be used are designated for the recovered refrigerant and labeled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off 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 all appropriate refrigerants including, when applicable, flammable refrigerants. 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. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.  
The recovered refrigerant shall be returned to the refrigerant supplier 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 evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

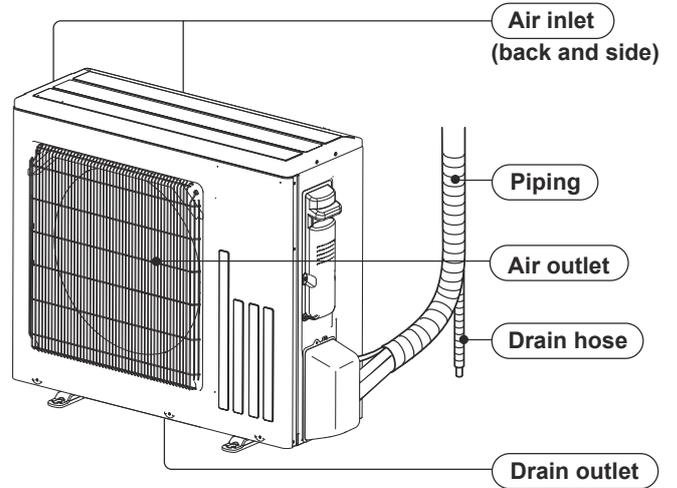
# 3

## PART NAMES AND FUNCTIONS

MUZ-HR25VF  
MUZ-HR35VF



MUZ-HR42VF  
MUZ-HR50VF



### ACCESSORIES

MODELS	MUZ-HR25VF MUZ-HR35VF MUZ-HR42VF MUZ-HR50VF
Drain socket	1

## 4

## SPECIFICATION

Outdoor model			MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF		
Power supply			Single phase, 230 V, 50 Hz					
Capacity Rated frequency (Min.-Max.)	Cooling	kW	2.5(0.5-2.9)	3.4(0.9-3.4)	4.2 (1.1 - 4.5)	5.0 (1.3 - 5.0)		
	Heating		3.15(0.5-3.5)	3.6(0.9-3.7)	4.7(0.9-5.4)	5.4 (1.4 - 6.5)		
Breaker Capacity		A	10			12		
Electrical data	Power input *1 (Set)	Cooling	800	1,210	1,340	2,050		
		Heating	850	975	1,300	1,550		
	Running current *1 (Set)	Cooling	3.8	5.9		9.0		
		Heating	4.1	4.6	5.8	6.9		
	Power factor *1 (Set)	Cooling	91	89	98	99		
		Heating	90	92	97			
Starting current *1 (Set)		A	4.1	5.9		9.0		
Coefficient of performance (COP) *1 (Set)		Cooling	3.13	2.81	3.13	2.44		
		Heating	3.71	3.69	3.62	3.48		
Compressor		Model		KVB059FTMMC	KVB073FUXMC	KVB092FYAMC	SVB130FBBMC	
		Output		W	490	550	650	900
		Current *1	Cooling	A	3.37	5.40	5.14	8.51
			Heating	A	3.67	4.15	5.27	6.31
Refrigeration oil (Model)		L	0.27 (FW68S)			0.35 (FW68S)		
Fan motor		Model		RC0J55-DC				
		Current *1	Cooling	A	0.24	0.23	0.20	
			Heating	A	0.24	0.23		
Dimensions W × H × D		mm	699 × 538 × 249			800 × 550 × 285		
Weight		kg	23	24	34	35		
Special remarks	Dehumidification		Cooling	L/h	0.8	1.1	1.6	2.0
	Air flow *1	Cooling	High	m <sup>3</sup> /h	1,818	1,932	2,058	
			Low		990	1,050	906	
		Heating	High		1,932	2,052	1,962	
			Med.		1,680	1,788	1,686	
			Low		1,356	1,452	1,260	
	Sound level *1		Cooling	dB(A)	50	51	50	
			Heating		50	51		
	Fan speed	Cooling	High	rpm	840		940	
			Low		480		460	
		Heating	High		890		900	
			Med.		780			
			Low		640		600	
Fan speed regulator		3						
Refrigerant filling capacity (R32)		kg	0.40	0.45	0.70	0.80		

**NOTE:** Test conditions are based on ISO 5151.

Cooling: Indoor	Dry-bulb temperature 27°C	Wet-bulb temperature	19°C
Outdoor	Dry-bulb temperature 35°C	Wet-bulb temperature	24°C
Heating: Indoor	Dry-bulb temperature 20°C	Wet-bulb temperature	15°C
Outdoor	Dry-bulb temperature 7°C	Wet-bulb temperature	6°C

Refrigerant piping length (one way): 5 m

\*1 Measured under rated operating frequency.

**Specifications and rated conditions of main electric parts**

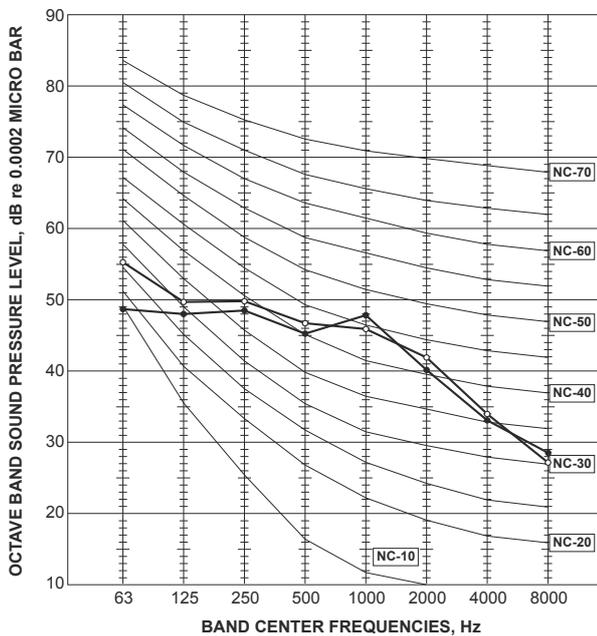
Item	Model	MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF
Smoothing capacitor	(C61)	—		600 μF/ 620 μF 420 V	
	(C62)	800 μF 420 V		600 μF/ 620 μF 420 V	
	(C63)	—		600 μF/ 620 μF 420 V	
Diode module	(DB61)	15 A 600 V			25 A 600 V
Diode module	(DB65)	25 A 600 V			
Fuse	(F61)	15A 250V		25A 250V	
	(F62)	15A 250V			
	(F701, F801, F901)	T3.15AL250V			
Power module	(IC700)	10 A 600 V		20 A 600 V	
	(IC932)	5 A 600 V			
Expansion valve coil	(LEV)	12 V DC			
Reactor	(L61)	18 mH	23 mH		
Switch power transistor	(Q821)	30/37 A 600 V			
Current-limiting PTC thermistor	(PTC64)	—		33 Ω	
	(PTC65)	33 Ω			
Terminal block	(TB1)	5 P			
Relay	(X63)	3 A 250 V			
	(X64)	20 A 250 V			
R.V.coil	(21S4)	220 - 240 V AC			

**5**

**NOISE CRITERIA CURVES**

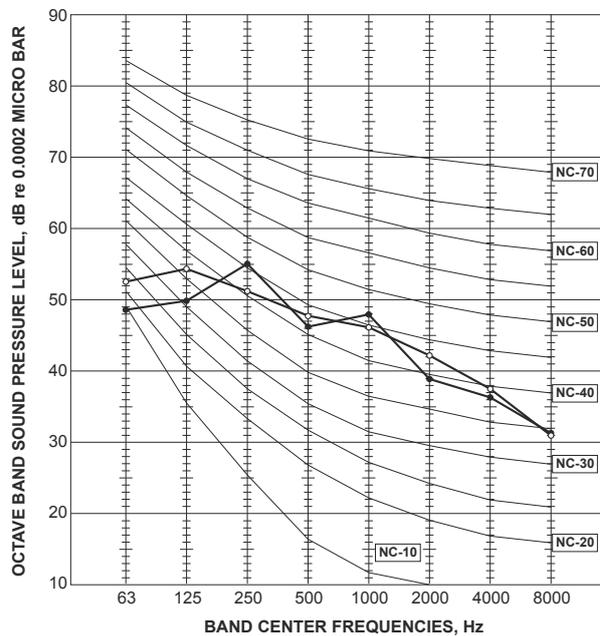
**MUZ-HR25VF**

FUNCTION	SPL(dB(A))	LINE
COOLING	50	●—●
HEATING	50	○—○



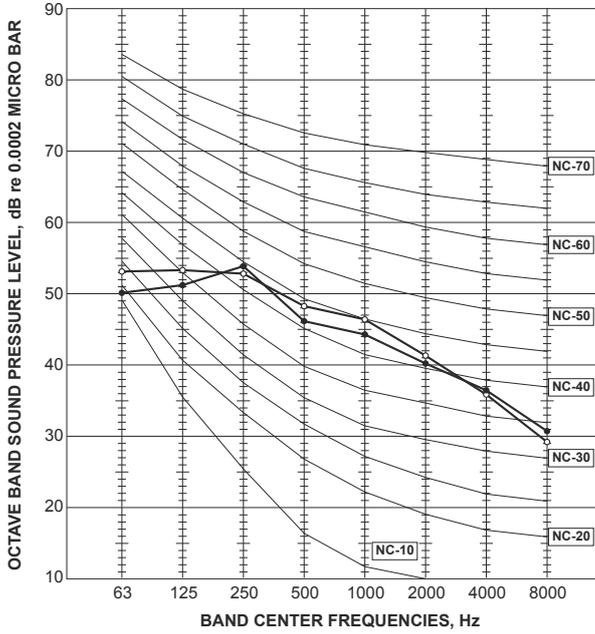
**MUZ-HR35VF**

FUNCTION	SPL(dB(A))	LINE
COOLING	51	●—●
HEATING	51	○—○



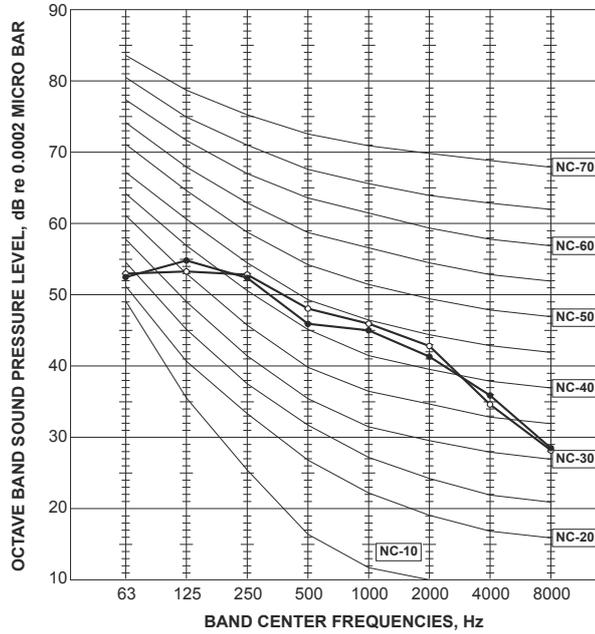
## MUZ-HR42VF

FUNCTION	SPL(dB(A))	LINE
COOLING	50	●—●
HEATING	51	○—○



## MUZ-HR50VF

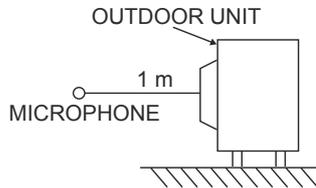
FUNCTION	SPL(dB(A))	LINE
COOLING	50	●—●
HEATING	51	○—○



### Test conditions

Cooling: Dry-bulb temperature 35°C Wet-bulb temperature 24°C

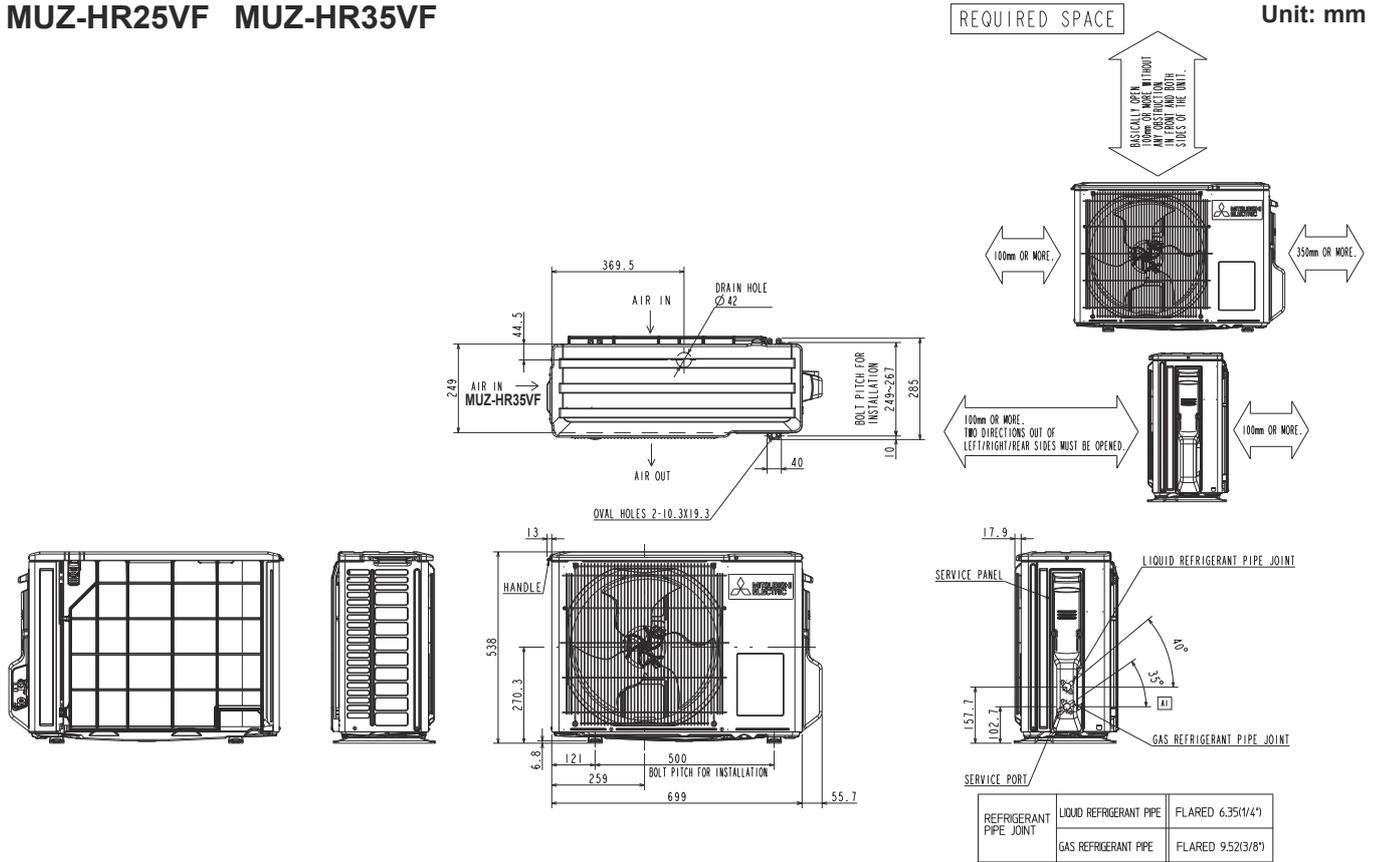
Heating: Dry-bulb temperature 7°C Wet-bulb temperature 6°C



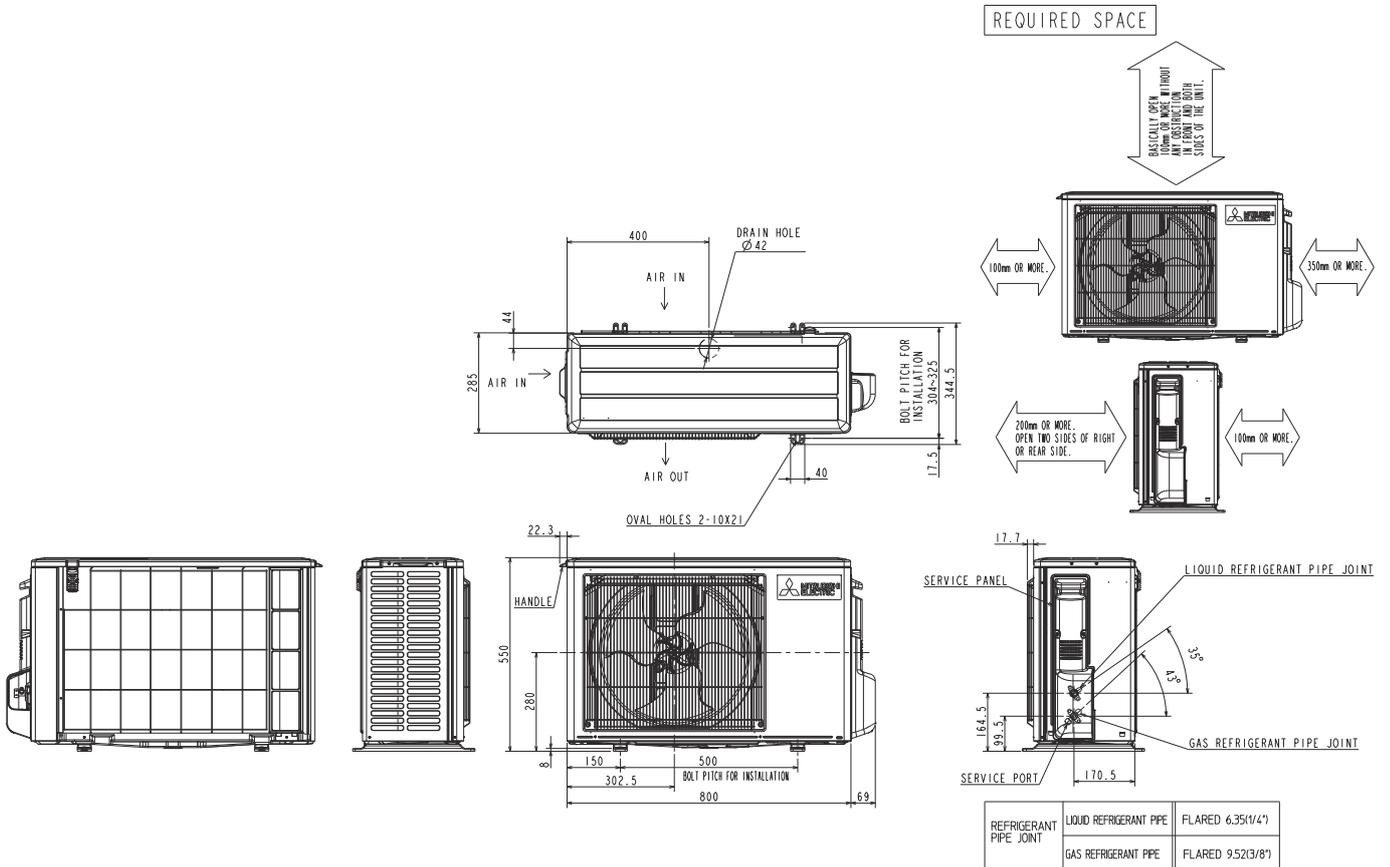
# 6

# OUTLINES AND DIMENSIONS

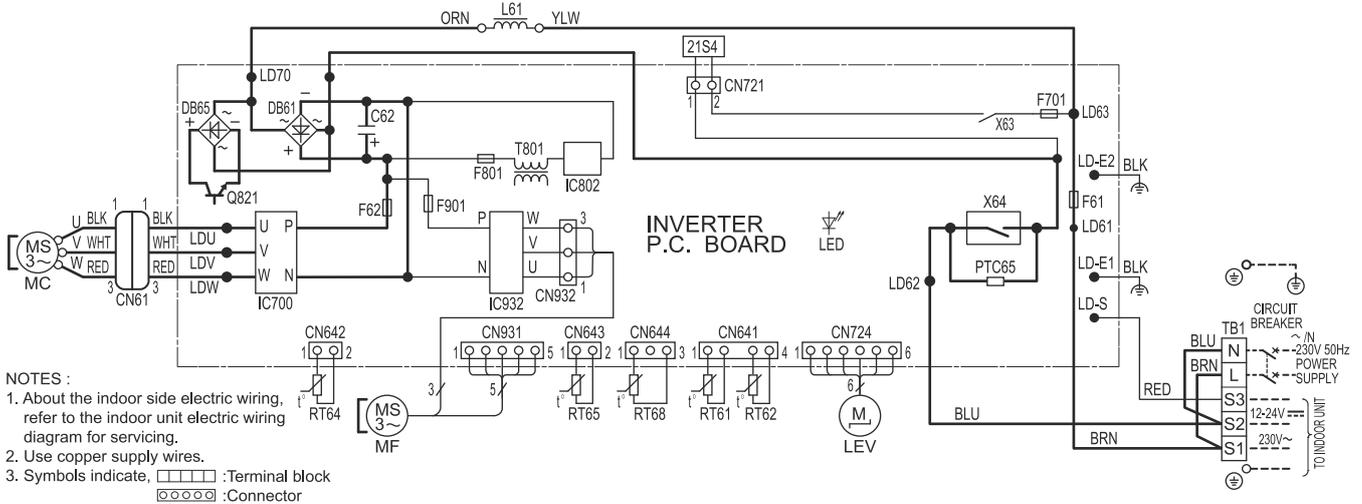
## MUZ-HR25VF MUZ-HR35VF



## MUZ-HR42VF MUZ-HR50VF

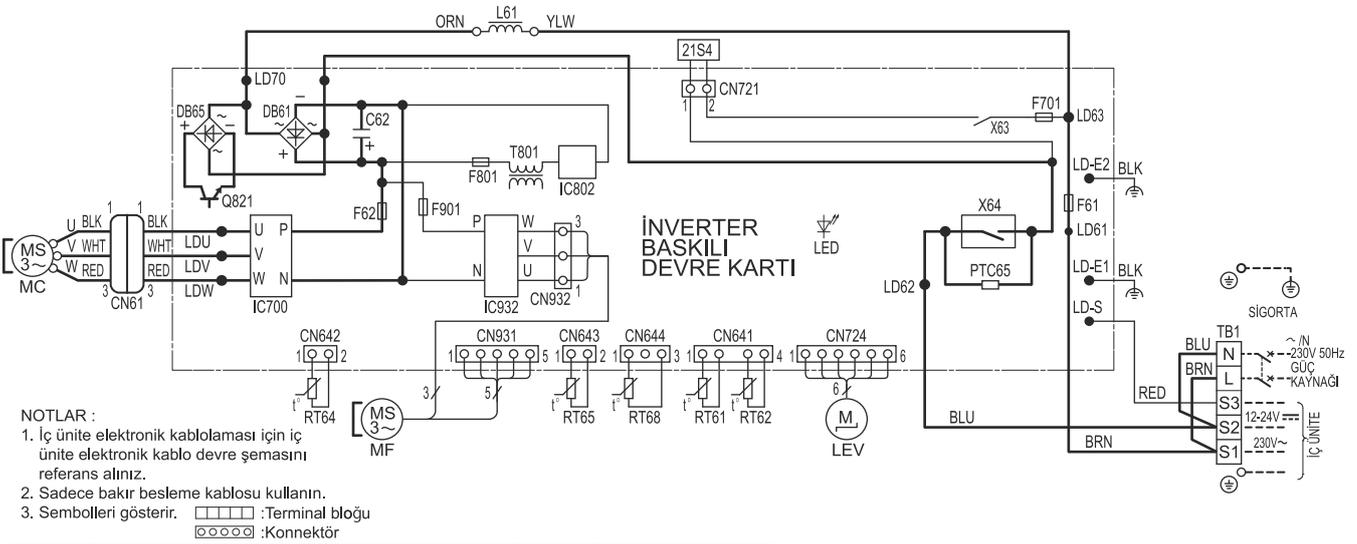


## MUZ-HR25VF -[E1], [ER1] MUZ-HR35VF -[E1], [ER1]



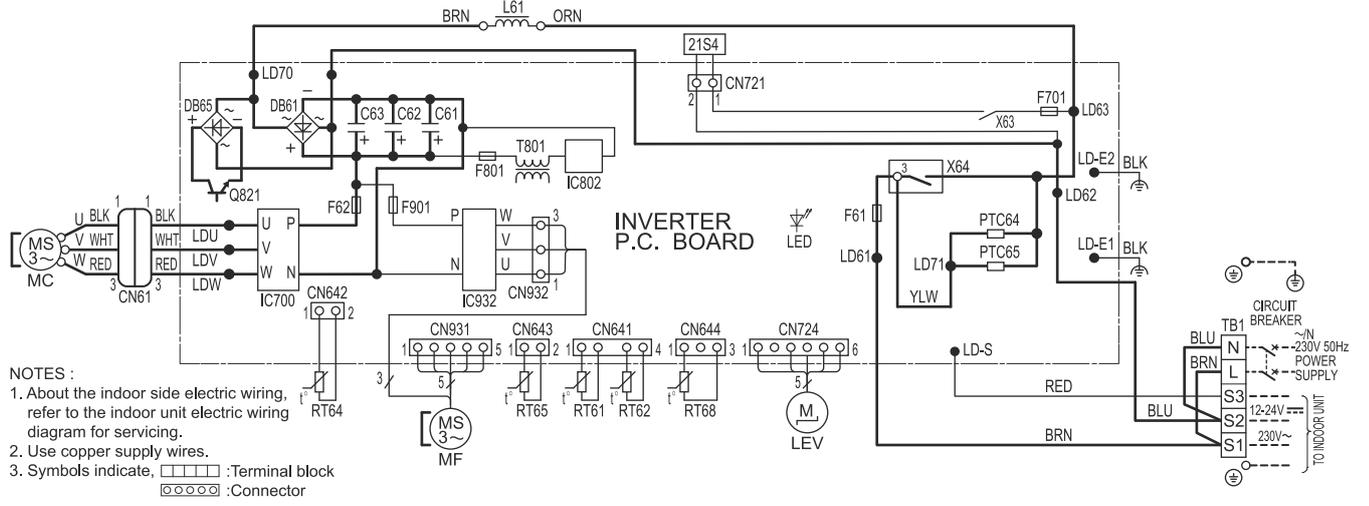
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CN61	CONNECTOR	LEV	EXPANSION VALVE COIL	RT64	FIN TEMP. THERMISTOR
C62	SMOOTHING CAPACITOR	L61	REACTOR	RT65	AMBIENT TEMP. THERMISTOR
DB61, DB65	DIODE MODULE	MC	KOMPRESÖR	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
F61, F62	FUSE (15A 250V)	MF	FAN MOTOR		
F701, F801, F901	FUSE (T3, 15AL250V)	PTC65	CIRCUIT PROTECTION	TB1	TERMINAL BLOCK
IC700, IC932	POWER MODULE	Q821	SWITCHING POWER TRANSISTOR	T801	TRANSFORMER
IC802	POWER DEVICE	RT61	DEFROST THERMISTOR	X63, X64	RELAY
LED	LED	RT62	DISCHARGE TEMP. THERMISTOR	21S4	REVERSING VALVE COIL

## MUZ-HR25VF -[ET1] MUZ-HR35VF -[ET1]



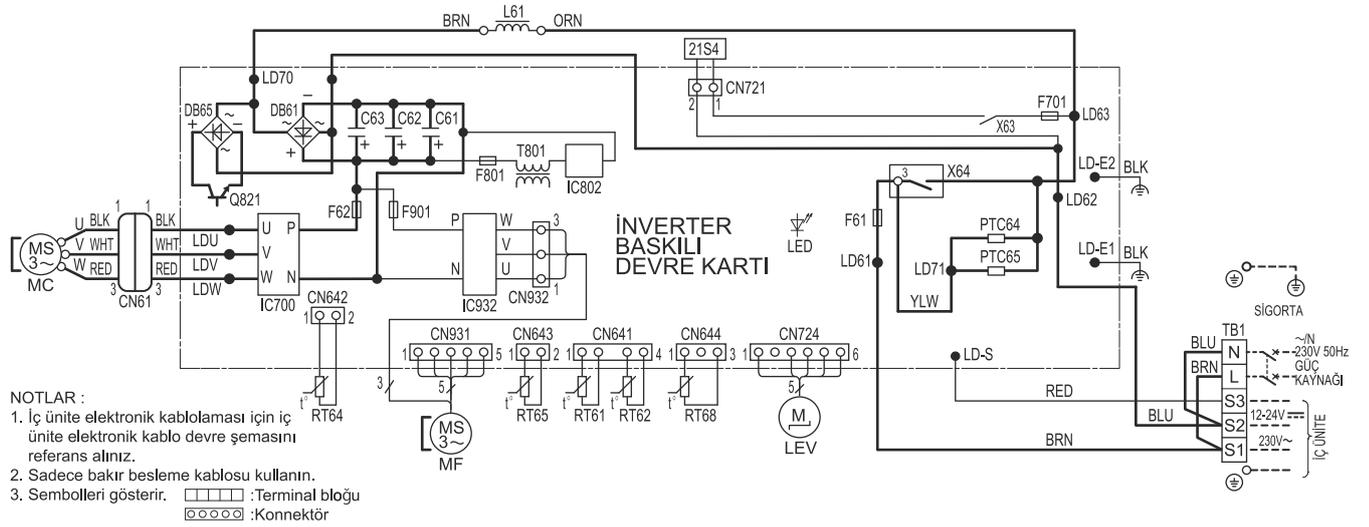
SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI
CN61	KONNEKTÖR	LEV	GENLEŞME VANASI SARGISI	RT64	FIN SICAKLIK TERMİSTÖRÜ
C62	KAPASİTÖR	L61	REAKTÖR	RT65	ORTAM SICAKLIK TERMİSTÖRÜ
DB61, DB65	DIYOT MODÜLÜ	MC	KOMPRESÖR	RT68	DIŞ ÜNİTE EŞANJÖR SICAKLIK TERMİSTÖRÜ
F61, F62	SİGORTA (15A 250V)	MF	FAN MOTORU		
F701, F801, F901	SİGORTA (T3, 15AL250V)	PTC65	DEVRE KORUMASI	TB1	TERMINAL BLOĞU
IC700, IC932	GÜÇ MODÜLÜ	Q821	SİVİÇLİ GÜÇ TRANSİSTÖRÜ	T801	TRANSFÖRATÖR
IC802	GÜÇ CİHAZI	RT61	DEFROST TERMİSTÖRÜ	X63, X64	RÖLE
LED	LED	RT62	BASMA SICAKLIK TERMİSTÖRÜ	21S4	4 YOLLU VANA SARGISI

## MUZ-HR42VF -[E1], [ER1] MUZ-HR50VF -[E1], [ER1]



SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
CN61	CONNECTOR	LEV	EXPANSION VALVE COIL	RT65	AMBIENT TEMP. THERMISTOR
C61,C62,C63	SMOOTHING CAPACITOR	L61	REACTOR	RT68	OUTDOOR HEAT EXCHANGER TEMP. THERMISTOR
DB61, DB65	DIODE MODULE	MC	COMPRESSOR	TB1	TERMINAL BLOCK
F61	FUSE (25A 250V)	MF	FAN MOTOR	T801	TRANSFORMER
F62	FUSE (15A 250V)	PTC64, PTC65	CIRCUIT PROTECTION	X63, X64	RELAY
F701, F801, F901	FUSE (T3. 15AL250V)	Q821	SWITCHING POWER TRANSISTOR	21S4	REVERSING VALVE COIL
IC700, IC932	POWER MODULE	RT61	DEFROST THERMISTOR		
IC802	POWER DEVICE	RT62	DISCHARGE TEMP. THERMISTOR		
LED	LED	RT64	FIN TEMP. THERMISTOR		

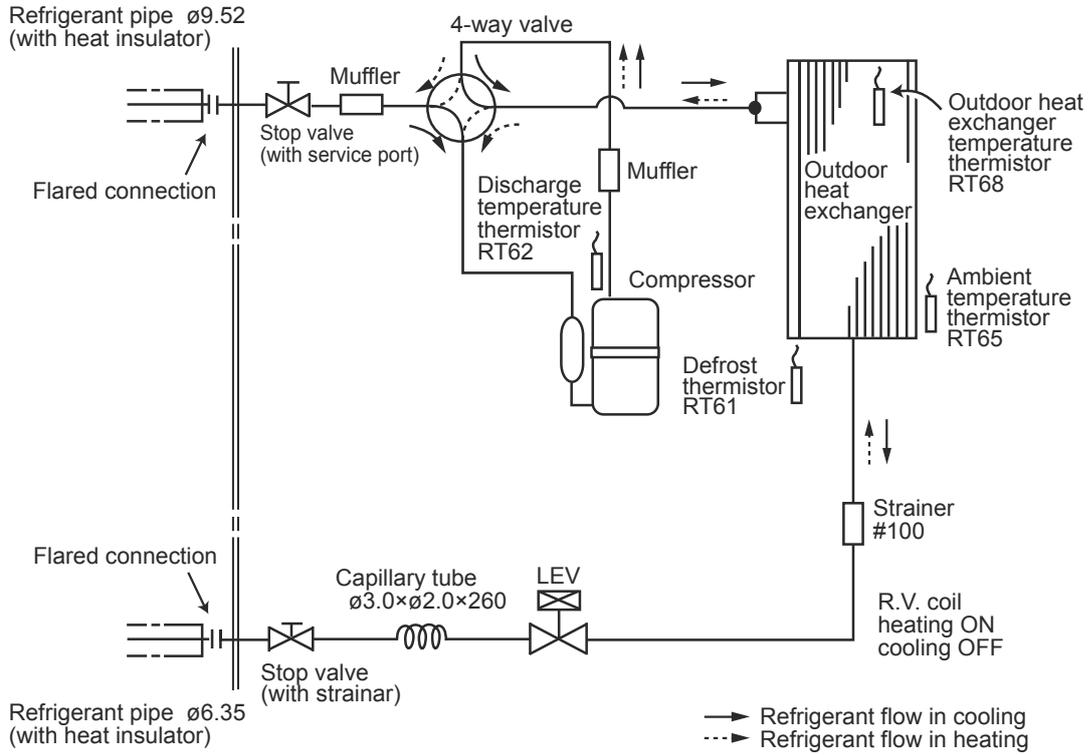
## MUZ-HR42VF -[ET1] MUZ-HR50VF -[ET1]



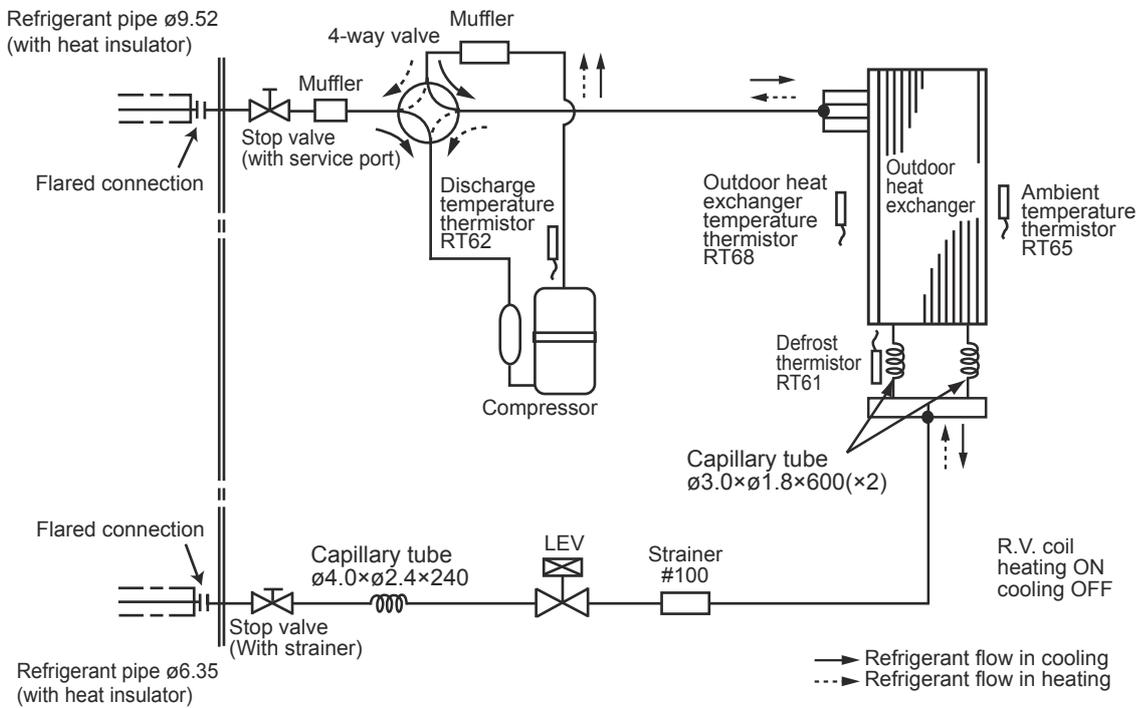
SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI	SEMBOL	PARÇA ADI
CN61	KONNEKTÖR	LEV	GENLEŞME VANASI SARGISI	RT65	ORTAM SICAKLIK TERMİSTÖRÜ
C61,C62,C63	KAPASİTÖR	L61	REAKTÖR	RT68	DIŞ ÜNİTE EŞANJÖR SICAKLIK TERMİSTÖRÜ
DB61, DB65	DİYOT MODÜLÜ	MC	KOMPRESÖR	TB1	TERMINAL BLOĞU
F61	SİGORTA (25A 250V)	MF	FAN MOTORU	T801	TRANSFORMATÖR
F62	SİGORTA (15A 250V)	PTC64, PTC65	DEVRE KORUMASI	X63, X64	RÖLE
F701, F801, F901	SİGORTA (T3. 15AL250V)	Q821	SİVİÇLİ GÜÇ TRANSİSTÖRÜ	21S4	4 YOLLU VANA SARGISI
IC700, IC932	GÜÇ MODÜLÜ	RT61	DEFROST TERMİSTÖRÜ		
IC802	GÜÇ CİHAZI	RT62	BASMA SICAKLIK TERMİSTÖRÜ		
LED	LED	RT64	FIN SICAKLIK TERMİSTÖRÜ		

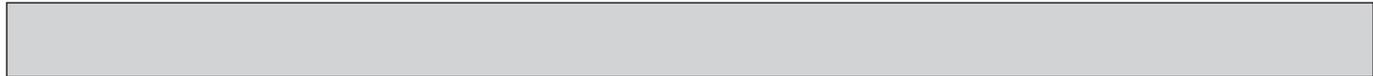
MUZ-HR25VF MUZ-HR35VF

Unit: mm



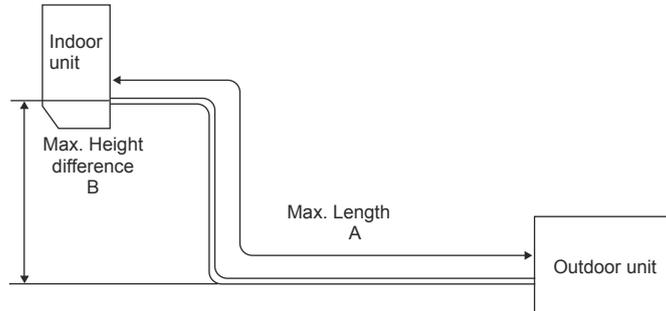
MUZ-HR42VF MUZ-HR50VF





### MAX. REFRIGERANT PIPING LENGTH and MAX. HEIGHT DIFFERENCE

Model	Refrigerant piping: m		Piping size O.D: mm	
	Max. Length A	Max. Height difference B	Gas	Liquid
<b>MUZ-HR25/35/42/50VF</b>	20	12	9.52	6.35



### ADDITIONAL REFRIGERANT CHARGE (R32: g)

Model	Outdoor unit precharged	Refrigerant piping length (one way)									
		7 m	8 m	9 m	10 m	11 m	12 m	13 m	14 m	15 m	20 m
<b>MUZ-HR25VF</b>	400	0	20	40	60	80	100	120	140	160	260
<b>MUZ-HR35VF</b>	450										
<b>MUZ-HR42VF</b>	700										
<b>MUZ-HR50VF</b>	800										

Calculation:  $X \text{ g} = 20 \text{ g/m} \times (\text{Refrigerant piping length (m)} - 7)$

**NOTE:** Refrigerant piping exceeding 7 m requires additional refrigerant charge according to the calculation.

**MUZ-HR25VF MUZ-HR35VF MUZ-HR42VF MUZ-HR50VF**

The standard specifications apply only to the operation of the air conditioner under normal conditions. Since operating conditions vary according to the areas where these units are installed, the following information has been provided to clarify the operating characteristics of the air conditioner under the conditions indicated by the performance curve.

**(1) GUARANTEED VOLTAGE**

198 ~ 264 V, 50 Hz

**(2) AIR FLOW**

Air flow should be set at MAX.

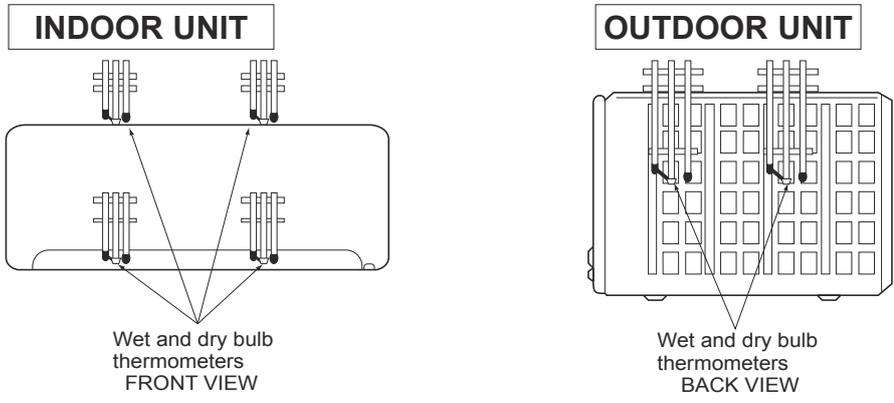
**(3) MAIN READINGS**

- |  |         |           |
|--|---------|-----------|
| (1) Indoor intake air wet-bulb temperature:  | °C [WB] | } Cooling |
| (2) Indoor outlet air wet-bulb temperature:  | °C [WB] |           |
| (3) Outdoor intake air dry-bulb temperature: | °C [DB] |           |
| (4) Total input:                             | W       |           |
| (5) Indoor intake air dry-bulb temperature:  | °C [DB] | } Heating |
| (6) Outdoor intake air wet-bulb temperature: | °C [WB] |           |
| (7) Total input:                             | W       |           |

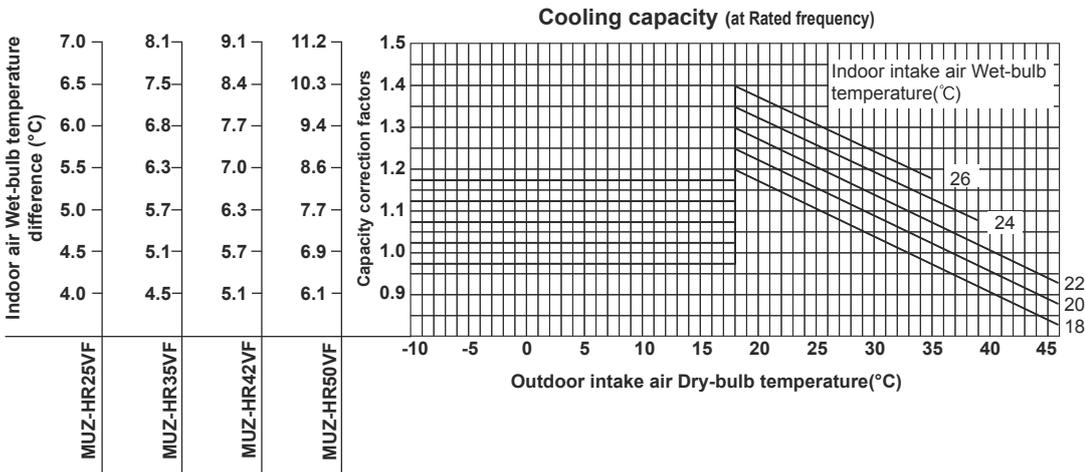
Indoor air wet and dry bulb temperature difference on the left side of the following chart shows the difference between the indoor intake air wet and dry bulb temperature and the indoor outlet air wet and dry bulb temperature for your reference at service.

**How to measure the indoor air wet and dry bulb temperature difference**

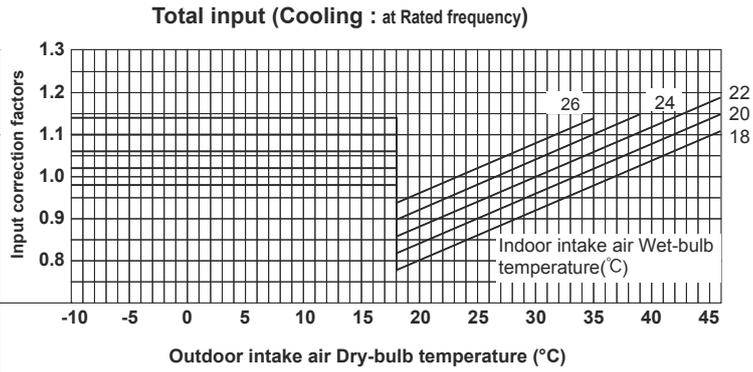
- Attach at least 2 sets of wet and dry bulb thermometers to the indoor air intake as shown in the figure, and at least 2 sets of wet and dry bulb thermometers to the indoor air outlet. The thermometers must be attached to the position where air speed is high.
- Attach at least 2 sets of wet and dry bulb thermometers to the outdoor air intake. Cover the thermometers to prevent direct rays of the sun.
- Check that the air filter is cleaned.
- Open windows and doors of room.
- Press the EMERGENCY OPERATION switch once (twice) to start the EMERGENCY COOL (HEAT) MODE.
- When system stabilizes after more than 15 minutes, measure temperature and take an average temperature.
- 10 minutes later, measure temperature again and check that the temperature does not change.



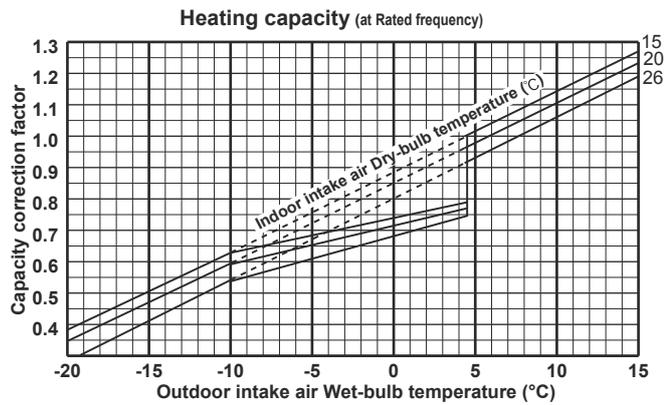
**9-1. CAPACITY AND INPUT CURVES**



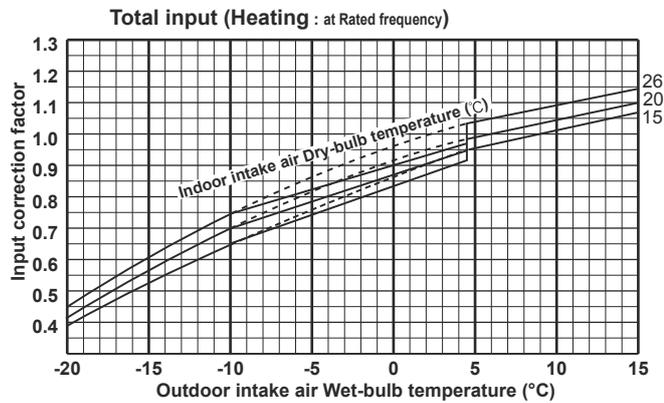
Indoor air Wet-bulb temperature difference (°C)	6.0	6.8	7.7	9.4
	5.5	6.3	7.0	8.6
	5.0	5.7	6.3	7.7
	4.5	5.1	5.7	6.9
	4.0	4.5	5.1	6.1
	3.5	4.0	4.4	5.4
	MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF



Indoor air Dry-bulb temperature difference (°C)	20.4	22.4	22.9	24.4
	18.8	20.7	21.2	22.5
	17.3	19.0	19.4	20.6
	15.7	17.2	17.6	18.7
	14.1	15.5	15.9	16.9
	12.6	13.8	14.1	15.0
	11.0	12.1	12.3	13.1
	9.4	10.3	10.6	11.2
	7.8	8.6	8.8	9.4
	6.3	6.9	7.1	7.5
	MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF



Indoor air Dry-bulb temperature difference (°C)	20.4	22.4	22.9	24.4
	18.8	20.7	21.2	22.5
	17.3	19.0	19.4	20.6
	15.7	17.2	17.6	18.7
	14.1	15.5	15.9	16.9
	12.6	13.8	14.1	15.0
	11.0	12.1	12.3	13.1
	9.4	10.3	10.6	11.2
	7.8	8.6	8.8	9.4
	6.3	6.9	7.1	7.5
	MUZ-HR25VF	MUZ-HR35VF	MUZ-HR42VF	MUZ-HR50VF

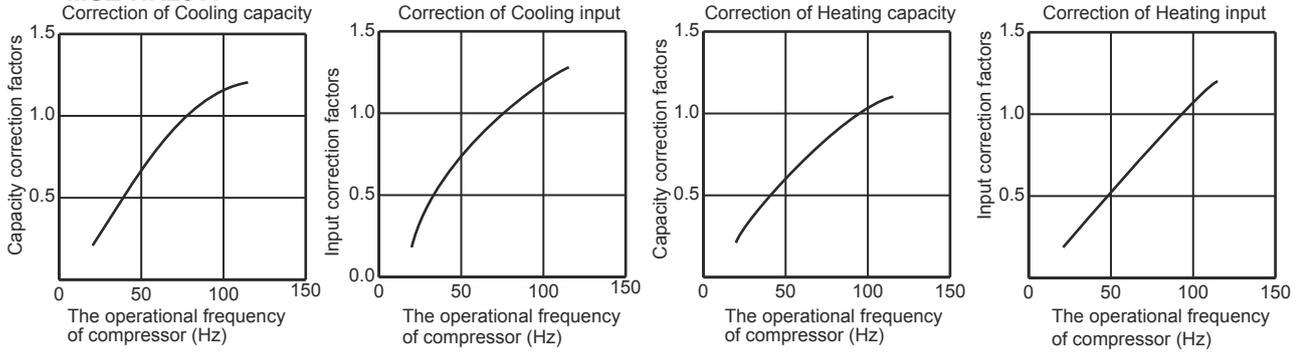


Lower limit of guaranteed operating range in heating  
 MUZ-HR25/35/42/50VF: -10°C

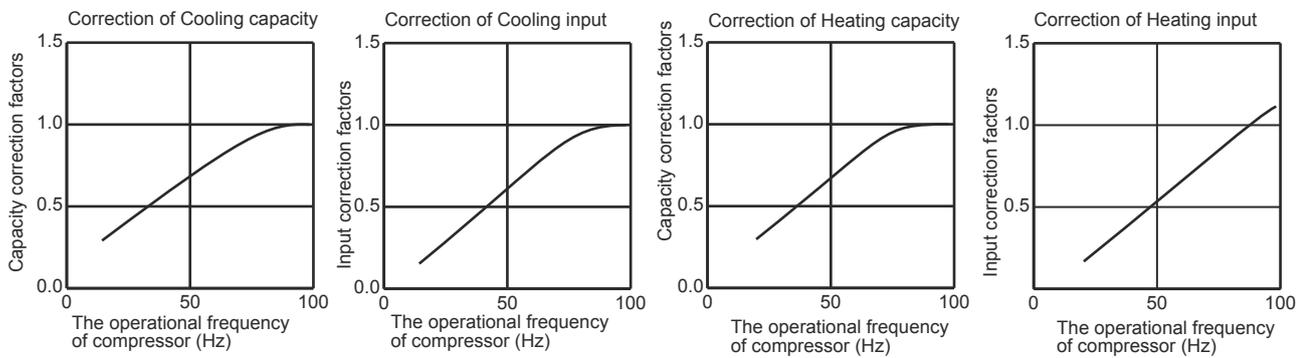
NOTE: The above broken lines are for the heating operation without any frost and defrost operation.

## 9-2. CAPACITY AND INPUT CORRECTION BY OPERATIONAL FREQUENCY OF COMPRESSOR

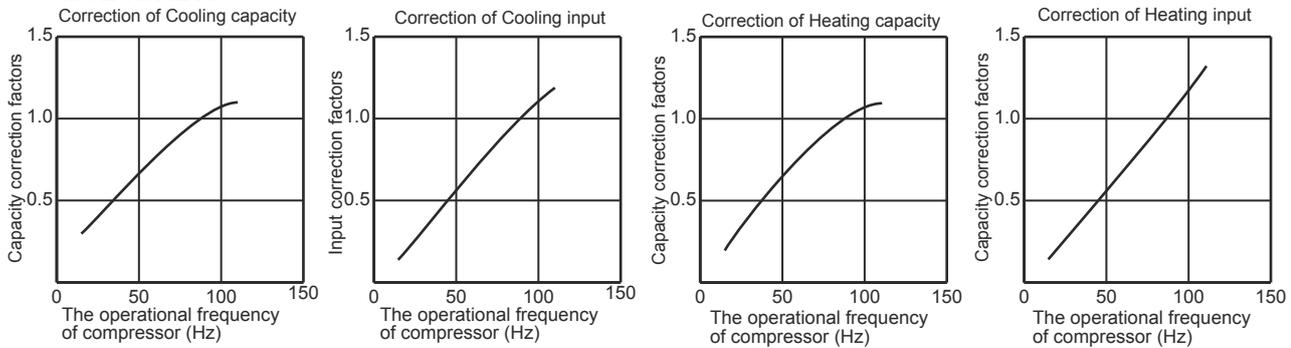
### MUZ-HR25VF



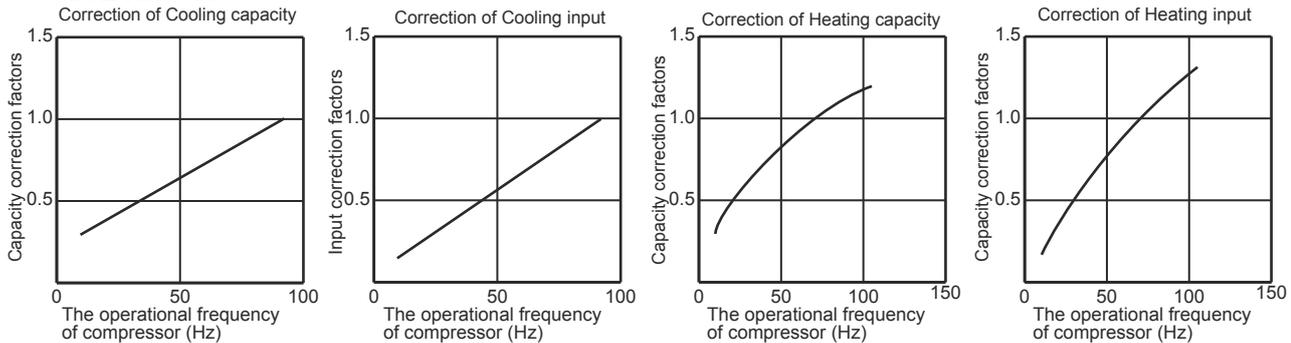
### MUZ-HR35VF



### MUZ-HR42VF



### MUZ-HR50VF



### 9-3. HOW TO OPERATE FIXED-FREQUENCY OPERATION

<Test run operation>

1. Press EMERGENCY OPERATION switch to start COOL or HEAT mode (COOL: Press once, HEAT: Press twice).
2. Test run operation starts and continues to operate for 30 minutes.
3. Compressor operates at rated frequency in COOL mode or 58 Hz in HEAT mode.
4. Indoor fan operates at High speed.
5. After 30 minutes, test run operation finishes and EMERGENCY OPERATION starts (operation frequency of compressor varies).
6. To cancel test run operation (EMERGENCY OPERATION), press EMERGENCY OPERATION switch or any button on remote controller.

### 9-4. OUTDOOR LOW PRESSURE AND OUTDOOR UNIT CURRENT

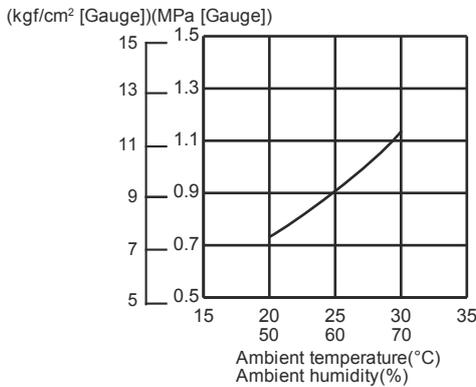
#### COOL operation

- ① Both indoor and outdoor unit are under the same temperature/humidity condition.
- ② Operation: TEST RUN OPERATION (Refer to 9-3.)

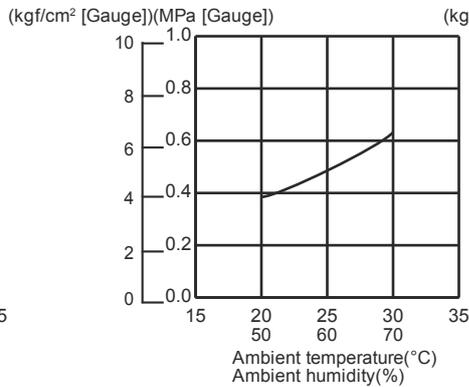
Dry-bulb temperature (°C)	Relative humidity (%)
20	50
25	60
30	70

#### Outdoor low pressure

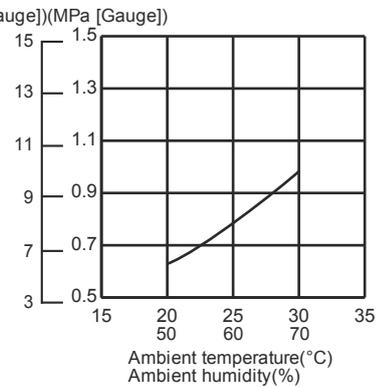
**MUZ-HR25VF**



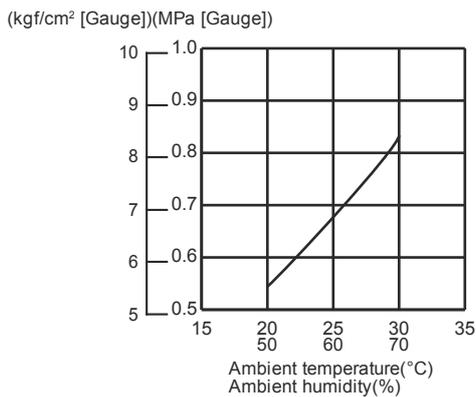
**MUZ-HR35VF**



**MUZ-HR42VF**



**MUZ-HR50VF**

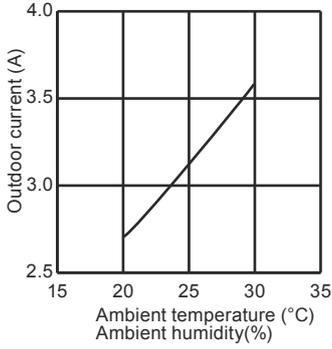


#### NOTE:

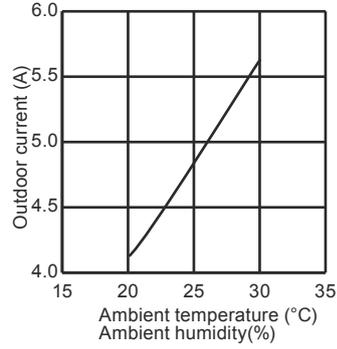
The unit of pressure has been changed to MPa on the international system of units (SI unit system)  
The conversion factor is: **1 (MPa [Gauge]) = 10.2 (kgf/cm² [Gauge])**

## Outdoor unit current

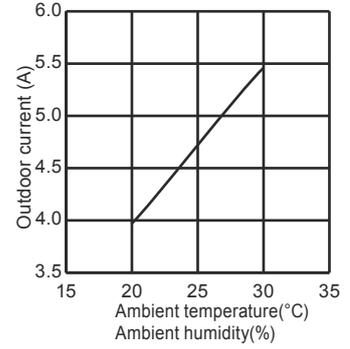
**MUZ-HR25VF**



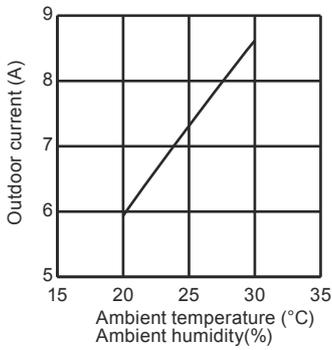
**MUZ-HR35VF**



**MUZ-HR42VF**



**MUZ-HR50VF**



## HEAT operation

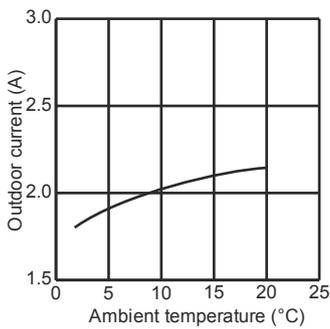
① Condition:

	Indoor	Outdoor			
Dry bulb temperature (°C)	20.0	2	7	15	20.0
Wet bulb temperature (°C)	14.5	1	6	12	14.5

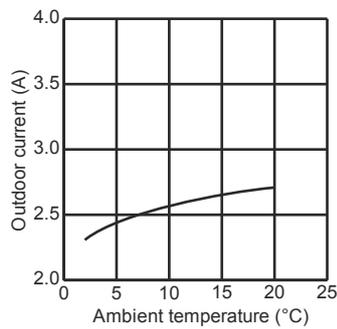
② Operation: Test run operation (Refer to 9-3.)

## Outdoor unit current

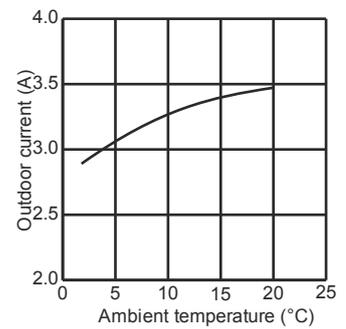
**MUZ-HR25VF**



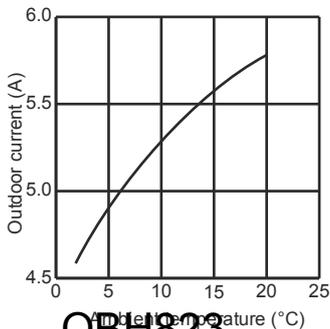
**MUZ-HR35VF**



**MUZ-HR42VF**



**MUZ-HR50VF**



**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR25VF**

CAPACITY: 2.5 kW

SHF: 0.78

INPUT: 800 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.94	1.76	0.60	640	2.81	1.69	0.60	672	2.70	1.62	0.60	704	2.60	1.56	0.60	736
21	20	3.06	1.47	0.48	672	2.94	1.41	0.48	712	2.85	1.37	0.48	728	2.75	1.32	0.48	760
22	18	2.94	1.88	0.64	640	2.81	1.80	0.64	672	2.70	1.73	0.64	704	2.60	1.66	0.64	736
22	20	3.06	1.59	0.52	672	2.94	1.53	0.52	712	2.85	1.48	0.52	728	2.75	1.43	0.52	760
22	22	3.19	1.28	0.40	696	3.08	1.23	0.40	740	3.00	1.20	0.40	760	2.88	1.15	0.40	792
23	18	2.94	2.00	0.68	640	2.81	1.91	0.68	672	2.70	1.84	0.68	704	2.60	1.77	0.68	736
23	20	3.06	1.72	0.56	672	2.94	1.65	0.56	712	2.85	1.60	0.56	728	2.75	1.54	0.56	760
23	22	3.19	1.40	0.44	696	3.08	1.35	0.44	740	3.00	1.32	0.44	760	2.88	1.27	0.44	792
24	18	2.94	2.12	0.72	640	2.81	2.03	0.72	672	2.70	1.94	0.72	704	2.60	1.87	0.72	736
24	20	3.06	1.84	0.60	672	2.94	1.76	0.60	712	2.85	1.71	0.60	728	2.75	1.65	0.60	760
24	22	3.19	1.53	0.48	696	3.08	1.48	0.48	740	3.00	1.44	0.48	760	2.88	1.38	0.48	792
24	24	3.35	1.21	0.36	728	3.23	1.16	0.36	768	3.15	1.13	0.36	792	3.05	1.10	0.36	832
25	18	2.94	2.23	0.76	640	2.81	2.14	0.76	672	2.70	2.05	0.76	704	2.60	1.98	0.76	736
25	20	3.06	1.96	0.64	672	2.94	1.88	0.64	712	2.85	1.82	0.64	728	2.75	1.76	0.64	760
25	22	3.19	1.66	0.52	696	3.08	1.60	0.52	740	3.00	1.56	0.52	760	2.88	1.50	0.52	792
25	24	3.35	1.34	0.40	728	3.23	1.29	0.40	768	3.15	1.26	0.40	792	3.05	1.22	0.40	832
26	18	2.94	2.35	0.80	640	2.81	2.25	0.80	672	2.70	2.16	0.80	704	2.60	2.08	0.80	736
26	20	3.06	2.08	0.68	672	2.94	2.00	0.68	712	2.85	1.94	0.68	728	2.75	1.87	0.68	760
26	22	3.19	1.79	0.56	696	3.08	1.72	0.56	740	3.00	1.68	0.56	760	2.88	1.61	0.56	792
26	24	3.35	1.47	0.44	728	3.23	1.42	0.44	768	3.15	1.39	0.44	792	3.05	1.34	0.44	832
26	26	3.45	1.10	0.32	768	3.35	1.07	0.32	808	3.30	1.06	0.32	832	3.20	1.02	0.32	856
27	18	2.94	2.47	0.84	640	2.81	2.36	0.84	672	2.70	2.27	0.84	704	2.60	2.18	0.84	736
27	20	3.06	2.21	0.72	672	2.94	2.12	0.72	712	2.85	2.05	0.72	728	2.75	1.98	0.72	760
27	22	3.19	1.91	0.60	696	3.08	1.85	0.60	740	3.00	1.80	0.60	760	2.88	1.73	0.60	792
27	24	3.35	1.61	0.48	728	3.23	1.55	0.48	768	3.15	1.51	0.48	792	3.05	1.46	0.48	832
27	26	3.45	1.24	0.36	768	3.35	1.21	0.36	808	3.30	1.19	0.36	832	3.20	1.15	0.36	856
28	18	2.94	2.59	0.88	640	2.81	2.48	0.88	672	2.70	2.38	0.88	704	2.60	2.29	0.88	736
28	20	3.06	2.33	0.76	672	2.94	2.23	0.76	712	2.85	2.17	0.76	728	2.75	2.09	0.76	760
28	22	3.19	2.04	0.64	696	3.08	1.97	0.64	740	3.00	1.92	0.64	760	2.88	1.84	0.64	792
28	24	3.35	1.74	0.52	728	3.23	1.68	0.52	768	3.15	1.64	0.52	792	3.05	1.59	0.52	832
28	26	3.45	1.38	0.40	768	3.35	1.34	0.40	808	3.30	1.32	0.40	832	3.20	1.28	0.40	856
29	18	2.94	2.70	0.92	640	2.81	2.59	0.92	672	2.70	2.48	0.92	704	2.60	2.39	0.92	736
29	20	3.06	2.45	0.80	672	2.94	2.35	0.80	712	2.85	2.28	0.80	728	2.75	2.20	0.80	760
29	22	3.19	2.17	0.68	696	3.08	2.09	0.68	740	3.00	2.04	0.68	760	2.88	1.96	0.68	792
29	24	3.35	1.88	0.56	728	3.23	1.81	0.56	768	3.15	1.76	0.56	792	3.05	1.71	0.56	832
29	26	3.45	1.52	0.44	768	3.35	1.47	0.44	808	3.30	1.45	0.44	832	3.20	1.41	0.44	856
30	18	2.94	2.82	0.96	640	2.81	2.70	0.96	672	2.70	2.59	0.96	704	2.60	2.50	0.96	736
30	20	3.06	2.57	0.84	672	2.94	2.47	0.84	712	2.85	2.39	0.84	728	2.75	2.31	0.84	760
30	22	3.19	2.30	0.72	696	3.08	2.21	0.72	740	3.00	2.16	0.72	760	2.88	2.07	0.72	792
30	24	3.35	2.01	0.60	728	3.23	1.94	0.60	768	3.15	1.89	0.60	792	3.05	1.83	0.60	832
30	26	3.45	1.66	0.48	768	3.35	1.61	0.48	808	3.30	1.58	0.48	832	3.20	1.54	0.48	856
31	18	2.94	2.94	1.00	640	2.81	2.81	1.00	672	2.70	2.70	1.00	704	2.60	2.60	1.00	736
31	20	3.06	2.70	0.88	672	2.94	2.59	0.88	712	2.85	2.51	0.88	728	2.75	2.42	0.88	760
31	22	3.19	2.42	0.76	696	3.08	2.34	0.76	740	3.00	2.28	0.76	760	2.88	2.19	0.76	792
31	24	3.35	2.14	0.64	728	3.23	2.06	0.64	768	3.15	2.02	0.64	792	3.05	1.95	0.64	832
31	26	3.45	1.79	0.52	768	3.35	1.74	0.52	808	3.30	1.72	0.52	832	3.20	1.66	0.52	856
32	18	2.94	2.94	1.00	640	2.81	2.81	1.00	672	2.70	2.70	1.00	704	2.60	2.60	1.00	736
32	20	3.06	2.82	0.92	672	2.94	2.70	0.92	712	2.85	2.62	0.92	728	2.75	2.53	0.92	760
32	22	3.19	2.55	0.80	696	3.08	2.46	0.80	740	3.00	2.40	0.80	760	2.88	2.30	0.80	792
32	24	3.35	2.28	0.68	728	3.23	2.19	0.68	768	3.15	2.14	0.68	792	3.05	2.07	0.68	832
32	26	3.45	1.93	0.56	768	3.35	1.88	0.56	808	3.30	1.85	0.56	832	3.20	1.79	0.56	856

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR25VF**

CAPACITY: 2.5 kW

SHF: 0.78

INPUT: 800 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	2.45	1.47	0.60	784	2.25	1.35	0.60	832	2.08	1.25	0.60	864
21	20	2.58	1.24	0.48	816	2.40	1.15	0.48	856	2.23	1.07	0.48	904
22	18	2.45	1.57	0.64	784	2.25	1.44	0.64	832	2.08	1.33	0.64	864
22	20	2.58	1.34	0.52	816	2.40	1.25	0.52	856	2.23	1.16	0.52	904
22	22	2.73	1.09	0.40	848	2.55	1.02	0.40	896	2.38	0.95	0.40	928
23	18	2.45	1.67	0.68	784	2.25	1.53	0.68	832	2.08	1.41	0.68	864
23	20	2.58	1.44	0.56	816	2.40	1.34	0.56	856	2.23	1.25	0.56	904
23	22	2.73	1.20	0.44	848	2.55	1.12	0.44	896	2.38	1.05	0.44	928
24	18	2.45	1.76	0.72	784	2.25	1.62	0.72	832	2.08	1.49	0.72	864
24	20	2.58	1.55	0.60	816	2.40	1.44	0.60	856	2.23	1.34	0.60	904
24	22	2.73	1.31	0.48	848	2.55	1.22	0.48	896	2.38	1.14	0.48	928
24	24	2.88	1.04	0.36	880	2.70	0.97	0.36	920	2.55	0.92	0.36	960
25	18	2.45	1.86	0.76	784	2.25	1.71	0.76	832	2.08	1.58	0.76	864
25	20	2.58	1.65	0.64	816	2.40	1.54	0.64	856	2.23	1.42	0.64	904
25	22	2.73	1.42	0.52	848	2.55	1.33	0.52	896	2.38	1.24	0.52	928
25	24	2.88	1.15	0.40	880	2.70	1.08	0.40	920	2.55	1.02	0.40	960
26	18	2.45	1.96	0.80	784	2.25	1.80	0.80	832	2.08	1.66	0.80	864
26	20	2.58	1.75	0.68	816	2.40	1.63	0.68	856	2.23	1.51	0.68	904
26	22	2.73	1.53	0.56	848	2.55	1.43	0.56	896	2.38	1.33	0.56	928
26	24	2.88	1.27	0.44	880	2.70	1.19	0.44	920	2.55	1.12	0.44	960
26	26	3.03	0.97	0.32	912	2.85	0.91	0.32	952	2.68	0.86	0.32	992
27	18	2.45	2.06	0.84	784	2.25	1.89	0.84	832	2.08	1.74	0.84	864
27	20	2.58	1.85	0.72	816	2.40	1.73	0.72	856	2.23	1.60	0.72	904
27	22	2.73	1.64	0.60	848	2.55	1.53	0.60	896	2.38	1.43	0.60	928
27	24	2.88	1.38	0.48	880	2.70	1.30	0.48	920	2.55	1.22	0.48	960
27	26	3.03	1.09	0.36	912	2.85	1.03	0.36	952	2.68	0.96	0.36	992
28	18	2.45	2.16	0.88	784	2.25	1.98	0.88	832	2.08	1.83	0.88	864
28	20	2.58	1.96	0.76	816	2.40	1.82	0.76	856	2.23	1.69	0.76	904
28	22	2.73	1.74	0.64	848	2.55	1.63	0.64	896	2.38	1.52	0.64	928
28	24	2.88	1.50	0.52	880	2.70	1.40	0.52	920	2.55	1.33	0.52	960
28	26	3.03	1.21	0.40	912	2.85	1.14	0.40	952	2.68	1.07	0.40	992
29	18	2.45	2.25	0.92	784	2.25	2.07	0.92	832	2.08	1.91	0.92	864
29	20	2.58	2.06	0.80	816	2.40	1.92	0.80	856	2.23	1.78	0.80	904
29	22	2.73	1.85	0.68	848	2.55	1.73	0.68	896	2.38	1.62	0.68	928
29	24	2.88	1.61	0.56	880	2.70	1.51	0.56	920	2.55	1.43	0.56	960
29	26	3.03	1.33	0.44	912	2.85	1.25	0.44	952	2.68	1.18	0.44	992
30	18	2.45	2.35	0.96	784	2.25	2.16	0.96	832	2.08	1.99	0.96	864
30	20	2.58	2.16	0.84	816	2.40	2.02	0.84	856	2.23	1.87	0.84	904
30	22	2.73	1.96	0.72	848	2.55	1.84	0.72	896	2.38	1.71	0.72	928
30	24	2.88	1.73	0.60	880	2.70	1.62	0.60	920	2.55	1.53	0.60	960
30	26	3.03	1.45	0.48	912	2.85	1.37	0.48	952	2.68	1.28	0.48	992
31	18	2.45	2.45	1.00	784	2.25	2.25	1.00	832	2.08	2.08	1.00	864
31	20	2.58	2.27	0.88	816	2.40	2.11	0.88	856	2.23	1.96	0.88	904
31	22	2.73	2.07	0.76	848	2.55	1.94	0.76	896	2.38	1.81	0.76	928
31	24	2.88	1.84	0.64	880	2.70	1.73	0.64	920	2.55	1.63	0.64	960
31	26	3.03	1.57	0.52	912	2.85	1.48	0.52	952	2.68	1.39	0.52	992
32	18	2.45	2.45	1.00	784	2.25	2.25	1.00	832	2.08	2.08	1.00	864
32	20	2.58	2.37	0.92	816	2.40	2.21	0.92	856	2.23	2.05	0.92	904
32	22	2.73	2.18	0.80	848	2.55	2.04	0.80	896	2.38	1.90	0.80	928
32	24	2.88	1.96	0.68	880	2.70	1.84	0.68	920	2.55	1.73	0.68	960
32	26	3.03	1.69	0.56	912	2.85	1.60	0.56	952	2.68	1.50	0.56	992

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR35VF**

CAPACITY: 3.4 kW

SHF: 0.78

INPUT: 1210 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.00	2.40	0.60	968	3.83	2.30	0.60	1016	3.67	2.20	0.60	1065	3.54	2.12	0.60	1113
21	20	4.17	2.00	0.48	1016	4.00	1.92	0.48	1077	3.88	1.86	0.48	1101	3.74	1.80	0.48	1150
22	18	4.00	2.56	0.64	968	3.83	2.45	0.64	1016	3.67	2.35	0.64	1065	3.54	2.26	0.64	1113
22	20	4.17	2.17	0.52	1016	4.00	2.08	0.52	1077	3.88	2.02	0.52	1101	3.74	1.94	0.52	1150
22	22	4.34	1.73	0.40	1053	4.18	1.67	0.40	1119	4.08	1.63	0.40	1150	3.91	1.56	0.40	1198
23	18	4.00	2.72	0.68	968	3.83	2.60	0.68	1016	3.67	2.50	0.68	1065	3.54	2.40	0.68	1113
23	20	4.17	2.33	0.56	1016	4.00	2.24	0.56	1077	3.88	2.17	0.56	1101	3.74	2.09	0.56	1150
23	22	4.34	1.91	0.44	1053	4.18	1.84	0.44	1119	4.08	1.80	0.44	1150	3.91	1.72	0.44	1198
24	18	4.00	2.88	0.72	968	3.83	2.75	0.72	1016	3.67	2.64	0.72	1065	3.54	2.55	0.72	1113
24	20	4.17	2.50	0.60	1016	4.00	2.40	0.60	1077	3.88	2.33	0.60	1101	3.74	2.24	0.60	1150
24	22	4.34	2.08	0.48	1053	4.18	2.01	0.48	1119	4.08	1.96	0.48	1150	3.91	1.88	0.48	1198
24	24	4.56	1.64	0.36	1101	4.39	1.58	0.36	1162	4.28	1.54	0.36	1198	4.15	1.49	0.36	1258
25	18	4.00	3.04	0.76	968	3.83	2.91	0.76	1016	3.67	2.79	0.76	1065	3.54	2.69	0.76	1113
25	20	4.17	2.67	0.64	1016	4.00	2.56	0.64	1077	3.88	2.48	0.64	1101	3.74	2.39	0.64	1150
25	22	4.34	2.25	0.52	1053	4.18	2.17	0.52	1119	4.08	2.12	0.52	1150	3.91	2.03	0.52	1198
25	24	4.56	1.82	0.40	1101	4.39	1.75	0.40	1162	4.28	1.71	0.40	1198	4.15	1.66	0.40	1258
26	18	4.00	3.20	0.80	968	3.83	3.06	0.80	1016	3.67	2.94	0.80	1065	3.54	2.83	0.80	1113
26	20	4.17	2.83	0.68	1016	4.00	2.72	0.68	1077	3.88	2.64	0.68	1101	3.74	2.54	0.68	1150
26	22	4.34	2.43	0.56	1053	4.18	2.34	0.56	1119	4.08	2.28	0.56	1150	3.91	2.19	0.56	1198
26	24	4.56	2.00	0.44	1101	4.39	1.93	0.44	1162	4.28	1.88	0.44	1198	4.15	1.83	0.44	1258
26	26	4.69	1.50	0.32	1162	4.56	1.46	0.32	1222	4.49	1.44	0.32	1258	4.35	1.39	0.32	1295
27	18	4.00	3.36	0.84	968	3.83	3.21	0.84	1016	3.67	3.08	0.84	1065	3.54	2.97	0.84	1113
27	20	4.17	3.00	0.72	1016	4.00	2.88	0.72	1077	3.88	2.79	0.72	1101	3.74	2.69	0.72	1150
27	22	4.34	2.60	0.60	1053	4.18	2.51	0.60	1119	4.08	2.45	0.60	1150	3.91	2.35	0.60	1198
27	24	4.56	2.19	0.48	1101	4.39	2.11	0.48	1162	4.28	2.06	0.48	1198	4.15	1.99	0.48	1258
27	26	4.69	1.69	0.36	1162	4.56	1.64	0.36	1222	4.49	1.62	0.36	1258	4.35	1.57	0.36	1295
28	18	4.00	3.52	0.88	968	3.83	3.37	0.88	1016	3.67	3.23	0.88	1065	3.54	3.11	0.88	1113
28	20	4.17	3.17	0.76	1016	4.00	3.04	0.76	1077	3.88	2.95	0.76	1101	3.74	2.84	0.76	1150
28	22	4.34	2.77	0.64	1053	4.18	2.68	0.64	1119	4.08	2.61	0.64	1150	3.91	2.50	0.64	1198
28	24	4.56	2.37	0.52	1101	4.39	2.28	0.52	1162	4.28	2.23	0.52	1198	4.15	2.16	0.52	1258
28	26	4.69	1.88	0.40	1162	4.56	1.82	0.40	1222	4.49	1.80	0.40	1258	4.35	1.74	0.40	1295
29	18	4.00	3.68	0.92	968	3.83	3.52	0.92	1016	3.67	3.38	0.92	1065	3.54	3.25	0.92	1113
29	20	4.17	3.33	0.80	1016	4.00	3.20	0.80	1077	3.88	3.10	0.80	1101	3.74	2.99	0.80	1150
29	22	4.34	2.95	0.68	1053	4.18	2.84	0.68	1119	4.08	2.77	0.68	1150	3.91	2.66	0.68	1198
29	24	4.56	2.55	0.56	1101	4.39	2.46	0.56	1162	4.28	2.40	0.56	1198	4.15	2.32	0.56	1258
29	26	4.69	2.06	0.44	1162	4.56	2.00	0.44	1222	4.49	1.97	0.44	1258	4.35	1.91	0.44	1295
30	18	4.00	3.84	0.96	968	3.83	3.67	0.96	1016	3.67	3.53	0.96	1065	3.54	3.39	0.96	1113
30	20	4.17	3.50	0.84	1016	4.00	3.36	0.84	1077	3.88	3.26	0.84	1101	3.74	3.14	0.84	1150
30	22	4.34	3.12	0.72	1053	4.18	3.01	0.72	1119	4.08	2.94	0.72	1150	3.91	2.82	0.72	1198
30	24	4.56	2.73	0.60	1101	4.39	2.63	0.60	1162	4.28	2.57	0.60	1198	4.15	2.49	0.60	1258
30	26	4.69	2.25	0.48	1162	4.56	2.19	0.48	1222	4.49	2.15	0.48	1258	4.35	2.09	0.48	1295
31	18	4.00	4.00	1.00	968	3.83	3.83	1.00	1016	3.67	3.67	1.00	1065	3.54	3.54	1.00	1113
31	20	4.17	3.67	0.88	1016	4.00	3.52	0.88	1077	3.88	3.41	0.88	1101	3.74	3.29	0.88	1150
31	22	4.34	3.29	0.76	1053	4.18	3.18	0.76	1119	4.08	3.10	0.76	1150	3.91	2.97	0.76	1198
31	24	4.56	2.92	0.64	1101	4.39	2.81	0.64	1162	4.28	2.74	0.64	1198	4.15	2.65	0.64	1258
31	26	4.69	2.44	0.52	1162	4.56	2.37	0.52	1222	4.49	2.33	0.52	1258	4.35	2.26	0.52	1295
32	18	4.00	4.00	1.00	968	3.83	3.83	1.00	1016	3.67	3.67	1.00	1065	3.54	3.54	1.00	1113
32	20	4.17	3.83	0.92	1016	4.00	3.68	0.92	1077	3.88	3.57	0.92	1101	3.74	3.44	0.92	1150
32	22	4.34	3.47	0.80	1053	4.18	3.35	0.80	1119	4.08	3.26	0.80	1150	3.91	3.13	0.80	1198
32	24	4.56	3.10	0.68	1101	4.39	2.98	0.68	1162	4.28	2.91	0.68	1198	4.15	2.82	0.68	1258
32	26	4.69	2.63	0.56	1162	4.56	2.55	0.56	1222	4.49	2.51	0.56	1258	4.35	2.44	0.56	1295

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR35VF**

CAPACITY: 3.4 kW

SHF: 0.78

INPUT: 1210 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	3.33	2.00	0.60	1186	3.06	1.84	0.60	1258	2.82	1.69	0.60	1307
21	20	3.50	1.68	0.48	1234	3.26	1.57	0.48	1295	3.03	1.45	0.48	1367
22	18	3.33	2.13	0.64	1186	3.06	1.96	0.64	1258	2.82	1.81	0.64	1307
22	20	3.50	1.82	0.52	1234	3.26	1.70	0.52	1295	3.03	1.57	0.52	1367
22	22	3.71	1.48	0.40	1283	3.47	1.39	0.40	1355	3.23	1.29	0.40	1404
23	18	3.33	2.27	0.68	1186	3.06	2.08	0.68	1258	2.82	1.92	0.68	1307
23	20	3.50	1.96	0.56	1234	3.26	1.83	0.56	1295	3.03	1.69	0.56	1367
23	22	3.71	1.63	0.44	1283	3.47	1.53	0.44	1355	3.23	1.42	0.44	1404
24	18	3.33	2.40	0.72	1186	3.06	2.20	0.72	1258	2.82	2.03	0.72	1307
24	20	3.50	2.10	0.60	1234	3.26	1.96	0.60	1295	3.03	1.82	0.60	1367
24	22	3.71	1.78	0.48	1283	3.47	1.66	0.48	1355	3.23	1.55	0.48	1404
24	24	3.91	1.41	0.36	1331	3.67	1.32	0.36	1392	3.47	1.25	0.36	1452
25	18	3.33	2.53	0.76	1186	3.06	2.33	0.76	1258	2.82	2.14	0.76	1307
25	20	3.50	2.24	0.64	1234	3.26	2.09	0.64	1295	3.03	1.94	0.64	1367
25	22	3.71	1.93	0.52	1283	3.47	1.80	0.52	1355	3.23	1.68	0.52	1404
25	24	3.91	1.56	0.40	1331	3.67	1.47	0.40	1392	3.47	1.39	0.40	1452
26	18	3.33	2.67	0.80	1186	3.06	2.45	0.80	1258	2.82	2.26	0.80	1307
26	20	3.50	2.38	0.68	1234	3.26	2.22	0.68	1295	3.03	2.06	0.68	1367
26	22	3.71	2.08	0.56	1283	3.47	1.94	0.56	1355	3.23	1.81	0.56	1404
26	24	3.91	1.72	0.44	1331	3.67	1.62	0.44	1392	3.47	1.53	0.44	1452
26	26	4.11	1.32	0.32	1379	3.88	1.24	0.32	1440	3.64	1.16	0.32	1500
27	18	3.33	2.80	0.84	1186	3.06	2.57	0.84	1258	2.82	2.37	0.84	1307
27	20	3.50	2.52	0.72	1234	3.26	2.35	0.72	1295	3.03	2.18	0.72	1367
27	22	3.71	2.22	0.60	1283	3.47	2.08	0.60	1355	3.23	1.94	0.60	1404
27	24	3.91	1.88	0.48	1331	3.67	1.76	0.48	1392	3.47	1.66	0.48	1452
27	26	4.11	1.48	0.36	1379	3.88	1.40	0.36	1440	3.64	1.31	0.36	1500
28	18	3.33	2.93	0.88	1186	3.06	2.69	0.88	1258	2.82	2.48	0.88	1307
28	20	3.50	2.66	0.76	1234	3.26	2.48	0.76	1295	3.03	2.30	0.76	1367
28	22	3.71	2.37	0.64	1283	3.47	2.22	0.64	1355	3.23	2.07	0.64	1404
28	24	3.91	2.03	0.52	1331	3.67	1.91	0.52	1392	3.47	1.80	0.52	1452
28	26	4.11	1.65	0.40	1379	3.88	1.55	0.40	1440	3.64	1.46	0.40	1500
29	18	3.33	3.07	0.92	1186	3.06	2.82	0.92	1258	2.82	2.60	0.92	1307
29	20	3.50	2.80	0.80	1234	3.26	2.61	0.80	1295	3.03	2.42	0.80	1367
29	22	3.71	2.52	0.68	1283	3.47	2.36	0.68	1355	3.23	2.20	0.68	1404
29	24	3.91	2.19	0.56	1331	3.67	2.06	0.56	1392	3.47	1.94	0.56	1452
29	26	4.11	1.81	0.44	1379	3.88	1.71	0.44	1440	3.64	1.60	0.44	1500
30	18	3.33	3.20	0.96	1186	3.06	2.94	0.96	1258	2.82	2.71	0.96	1307
30	20	3.50	2.94	0.84	1234	3.26	2.74	0.84	1295	3.03	2.54	0.84	1367
30	22	3.71	2.67	0.72	1283	3.47	2.50	0.72	1355	3.23	2.33	0.72	1404
30	24	3.91	2.35	0.60	1331	3.67	2.20	0.60	1392	3.47	2.08	0.60	1452
30	26	4.11	1.97	0.48	1379	3.88	1.86	0.48	1440	3.64	1.75	0.48	1500
31	18	3.33	3.33	1.00	1186	3.06	3.06	1.00	1258	2.82	2.82	1.00	1307
31	20	3.50	3.08	0.88	1234	3.26	2.87	0.88	1295	3.03	2.66	0.88	1367
31	22	3.71	2.82	0.76	1283	3.47	2.64	0.76	1355	3.23	2.45	0.76	1404
31	24	3.91	2.50	0.64	1331	3.67	2.35	0.64	1392	3.47	2.22	0.64	1452
31	26	4.11	2.14	0.52	1379	3.88	2.02	0.52	1440	3.64	1.89	0.52	1500
32	18	3.33	3.33	1.00	1186	3.06	3.06	1.00	1258	2.82	2.82	1.00	1307
32	20	3.50	3.22	0.92	1234	3.26	3.00	0.92	1295	3.03	2.78	0.92	1367
32	22	3.71	2.96	0.80	1283	3.47	2.77	0.80	1355	3.23	2.58	0.80	1404
32	24	3.91	2.66	0.68	1331	3.67	2.50	0.68	1392	3.47	2.36	0.68	1452
32	26	4.11	2.30	0.56	1379	3.88	2.17	0.56	1440	3.64	2.04	0.56	1500

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR42VF**

CAPACITY: 4.2 kW

SHF: 0.74

INPUT: 1340 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.94	2.76	0.56	1072	4.73	2.65	0.56	1126	4.54	2.54	0.56	1179	4.37	2.45	0.56	1233
21	20	5.15	2.26	0.44	1126	4.94	2.17	0.44	1193	4.79	2.11	0.44	1219	4.62	2.03	0.44	1273
22	18	4.94	2.96	0.60	1072	4.73	2.84	0.60	1126	4.54	2.72	0.60	1179	4.37	2.62	0.60	1233
22	20	5.15	2.47	0.48	1126	4.94	2.37	0.48	1193	4.79	2.30	0.48	1219	4.62	2.22	0.48	1273
22	22	5.36	1.93	0.36	1166	5.17	1.86	0.36	1240	5.04	1.81	0.36	1273	4.83	1.74	0.36	1327
23	18	4.94	3.16	0.64	1072	4.73	3.02	0.64	1126	4.54	2.90	0.64	1179	4.37	2.80	0.64	1233
23	20	5.15	2.68	0.52	1126	4.94	2.57	0.52	1193	4.79	2.49	0.52	1219	4.62	2.40	0.52	1273
23	22	5.36	2.14	0.40	1166	5.17	2.07	0.40	1240	5.04	2.02	0.40	1273	4.83	1.93	0.40	1327
24	18	4.94	3.36	0.68	1072	4.73	3.21	0.68	1126	4.54	3.08	0.68	1179	4.37	2.97	0.68	1233
24	20	5.15	2.88	0.56	1126	4.94	2.76	0.56	1193	4.79	2.68	0.56	1219	4.62	2.59	0.56	1273
24	22	5.36	2.36	0.44	1166	5.17	2.27	0.44	1240	5.04	2.22	0.44	1273	4.83	2.13	0.44	1327
24	24	5.63	1.80	0.32	1219	5.42	1.73	0.32	1286	5.29	1.69	0.32	1327	5.12	1.64	0.32	1394
25	18	4.94	3.55	0.72	1072	4.73	3.40	0.72	1126	4.54	3.27	0.72	1179	4.37	3.14	0.72	1233
25	20	5.15	3.09	0.60	1126	4.94	2.96	0.60	1193	4.79	2.87	0.60	1219	4.62	2.77	0.60	1273
25	22	5.36	2.57	0.48	1166	5.17	2.48	0.48	1240	5.04	2.42	0.48	1273	4.83	2.32	0.48	1327
25	24	5.63	2.03	0.36	1219	5.42	1.95	0.36	1286	5.29	1.91	0.36	1327	5.12	1.84	0.36	1394
26	18	4.94	3.75	0.76	1072	4.73	3.59	0.76	1126	4.54	3.45	0.76	1179	4.37	3.32	0.76	1233
26	20	5.15	3.29	0.64	1126	4.94	3.16	0.64	1193	4.79	3.06	0.64	1219	4.62	2.96	0.64	1273
26	22	5.36	2.78	0.52	1166	5.17	2.69	0.52	1240	5.04	2.62	0.52	1273	4.83	2.51	0.52	1327
26	24	5.63	2.25	0.40	1219	5.42	2.17	0.40	1286	5.29	2.12	0.40	1327	5.12	2.05	0.40	1394
26	26	5.80	1.62	0.28	1286	5.63	1.58	0.28	1353	5.54	1.55	0.28	1394	5.38	1.51	0.28	1434
27	18	4.94	3.95	0.80	1072	4.73	3.78	0.80	1126	4.54	3.63	0.80	1179	4.37	3.49	0.80	1233
27	20	5.15	3.50	0.68	1126	4.94	3.36	0.68	1193	4.79	3.26	0.68	1219	4.62	3.14	0.68	1273
27	22	5.36	3.00	0.56	1166	5.17	2.89	0.56	1240	5.04	2.82	0.56	1273	4.83	2.70	0.56	1327
27	24	5.63	2.48	0.44	1219	5.42	2.38	0.44	1286	5.29	2.33	0.44	1327	5.12	2.25	0.44	1394
27	26	5.80	1.85	0.32	1286	5.63	1.80	0.32	1353	5.54	1.77	0.32	1394	5.38	1.72	0.32	1434
28	18	4.94	4.15	0.84	1072	4.73	3.97	0.84	1126	4.54	3.81	0.84	1179	4.37	3.67	0.84	1233
28	20	5.15	3.70	0.72	1126	4.94	3.55	0.72	1193	4.79	3.45	0.72	1219	4.62	3.33	0.72	1273
28	22	5.36	3.21	0.60	1166	5.17	3.10	0.60	1240	5.04	3.02	0.60	1273	4.83	2.90	0.60	1327
28	24	5.63	2.70	0.48	1219	5.42	2.60	0.48	1286	5.29	2.54	0.48	1327	5.12	2.46	0.48	1394
28	26	5.80	2.09	0.36	1286	5.63	2.03	0.36	1353	5.54	2.00	0.36	1394	5.38	1.94	0.36	1434
29	18	4.94	4.34	0.88	1072	4.73	4.16	0.88	1126	4.54	3.99	0.88	1179	4.37	3.84	0.88	1233
29	20	5.15	3.91	0.76	1126	4.94	3.75	0.76	1193	4.79	3.64	0.76	1219	4.62	3.51	0.76	1273
29	22	5.36	3.43	0.64	1166	5.17	3.31	0.64	1240	5.04	3.23	0.64	1273	4.83	3.09	0.64	1327
29	24	5.63	2.93	0.52	1219	5.42	2.82	0.52	1286	5.29	2.75	0.52	1327	5.12	2.66	0.52	1394
29	26	5.80	2.32	0.40	1286	5.63	2.25	0.40	1353	5.54	2.22	0.40	1394	5.38	2.15	0.40	1434
30	18	4.94	4.54	0.92	1072	4.73	4.35	0.92	1126	4.54	4.17	0.92	1179	4.37	4.02	0.92	1233
30	20	5.15	4.12	0.80	1126	4.94	3.95	0.80	1193	4.79	3.83	0.80	1219	4.62	3.70	0.80	1273
30	22	5.36	3.64	0.68	1166	5.17	3.51	0.68	1240	5.04	3.43	0.68	1273	4.83	3.28	0.68	1327
30	24	5.63	3.15	0.56	1219	5.42	3.03	0.56	1286	5.29	2.96	0.56	1327	5.12	2.87	0.56	1394
30	26	5.80	2.55	0.44	1286	5.63	2.48	0.44	1353	5.54	2.44	0.44	1394	5.38	2.37	0.44	1434
31	18	4.94	4.74	0.96	1072	4.73	4.54	0.96	1126	4.54	4.35	0.96	1179	4.37	4.19	0.96	1233
31	20	5.15	4.32	0.84	1126	4.94	4.15	0.84	1193	4.79	4.02	0.84	1219	4.62	3.88	0.84	1273
31	22	5.36	3.86	0.72	1166	5.17	3.72	0.72	1240	5.04	3.63	0.72	1273	4.83	3.48	0.72	1327
31	24	5.63	3.38	0.60	1219	5.42	3.25	0.60	1286	5.29	3.18	0.60	1327	5.12	3.07	0.60	1394
31	26	5.80	2.78	0.48	1286	5.63	2.70	0.48	1353	5.54	2.66	0.48	1394	5.38	2.58	0.48	1434
32	18	4.94	4.94	1.00	1072	4.73	4.73	1.00	1126	4.54	4.54	1.00	1179	4.37	4.37	1.00	1233
32	20	5.15	4.53	0.88	1126	4.94	4.34	0.88	1193	4.79	4.21	0.88	1219	4.62	4.07	0.88	1273
32	22	5.36	4.07	0.76	1166	5.17	3.93	0.76	1240	5.04	3.83	0.76	1273	4.83	3.67	0.76	1327
32	24	5.63	3.60	0.64	1219	5.42	3.47	0.64	1286	5.29	3.39	0.64	1327	5.12	3.28	0.64	1394
32	26	5.80	3.01	0.52	1286	5.63	2.93	0.52	1353	5.54	2.88	0.52	1394	5.38	2.80	0.52	1434

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR42VF**

CAPACITY: 4.2 kW

SHF: 0.74

INPUT: 1340 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.12	2.30	0.56	1313	3.78	2.12	0.56	1394	3.49	1.95	0.56	1447
21	20	4.33	1.90	0.44	1367	4.03	1.77	0.44	1434	3.74	1.64	0.44	1514
22	18	4.12	2.47	0.60	1313	3.78	2.27	0.60	1394	3.49	2.09	0.60	1447
22	20	4.33	2.08	0.48	1367	4.03	1.94	0.48	1434	3.74	1.79	0.48	1514
22	22	4.58	1.65	0.36	1420	4.28	1.54	0.36	1501	3.99	1.44	0.36	1554
23	18	4.12	2.63	0.64	1313	3.78	2.42	0.64	1394	3.49	2.23	0.64	1447
23	20	4.33	2.25	0.52	1367	4.03	2.10	0.52	1434	3.74	1.94	0.52	1514
23	22	4.58	1.83	0.40	1420	4.28	1.71	0.40	1501	3.99	1.60	0.40	1554
24	18	4.12	2.80	0.68	1313	3.78	2.57	0.68	1394	3.49	2.37	0.68	1447
24	20	4.33	2.42	0.56	1367	4.03	2.26	0.56	1434	3.74	2.09	0.56	1514
24	22	4.58	2.01	0.44	1420	4.28	1.88	0.44	1501	3.99	1.76	0.44	1554
24	24	4.83	1.55	0.32	1474	4.54	1.45	0.32	1541	4.28	1.37	0.32	1608
25	18	4.12	2.96	0.72	1313	3.78	2.72	0.72	1394	3.49	2.51	0.72	1447
25	20	4.33	2.60	0.60	1367	4.03	2.42	0.60	1434	3.74	2.24	0.60	1514
25	22	4.58	2.20	0.48	1420	4.28	2.06	0.48	1501	3.99	1.92	0.48	1554
25	24	4.83	1.74	0.36	1474	4.54	1.63	0.36	1541	4.28	1.54	0.36	1608
26	18	4.12	3.13	0.76	1313	3.78	2.87	0.76	1394	3.49	2.65	0.76	1447
26	20	4.33	2.77	0.64	1367	4.03	2.58	0.64	1434	3.74	2.39	0.64	1514
26	22	4.58	2.38	0.52	1420	4.28	2.23	0.52	1501	3.99	2.07	0.52	1554
26	24	4.83	1.93	0.40	1474	4.54	1.81	0.40	1541	4.28	1.71	0.40	1608
26	26	5.08	1.42	0.28	1528	4.79	1.34	0.28	1595	4.49	1.26	0.28	1662
27	18	4.12	3.29	0.80	1313	3.78	3.02	0.80	1394	3.49	2.79	0.80	1447
27	20	4.33	2.94	0.68	1367	4.03	2.74	0.68	1434	3.74	2.54	0.68	1514
27	22	4.58	2.56	0.56	1420	4.28	2.40	0.56	1501	3.99	2.23	0.56	1554
27	24	4.83	2.13	0.44	1474	4.54	2.00	0.44	1541	4.28	1.88	0.44	1608
27	26	5.08	1.63	0.32	1528	4.79	1.53	0.32	1595	4.49	1.44	0.32	1662
28	18	4.12	3.46	0.84	1313	3.78	3.18	0.84	1394	3.49	2.93	0.84	1447
28	20	4.33	3.11	0.72	1367	4.03	2.90	0.72	1434	3.74	2.69	0.72	1514
28	22	4.58	2.75	0.60	1420	4.28	2.57	0.60	1501	3.99	2.39	0.60	1554
28	24	4.83	2.32	0.48	1474	4.54	2.18	0.48	1541	4.28	2.06	0.48	1608
28	26	5.08	1.83	0.36	1528	4.79	1.72	0.36	1595	4.49	1.62	0.36	1662
29	18	4.12	3.62	0.88	1313	3.78	3.33	0.88	1394	3.49	3.07	0.88	1447
29	20	4.33	3.29	0.76	1367	4.03	3.06	0.76	1434	3.74	2.84	0.76	1514
29	22	4.58	2.93	0.64	1420	4.28	2.74	0.64	1501	3.99	2.55	0.64	1554
29	24	4.83	2.51	0.52	1474	4.54	2.36	0.52	1541	4.28	2.23	0.52	1608
29	26	5.08	2.03	0.40	1528	4.79	1.92	0.40	1595	4.49	1.80	0.40	1662
30	18	4.12	3.79	0.92	1313	3.78	3.48	0.92	1394	3.49	3.21	0.92	1447
30	20	4.33	3.46	0.80	1367	4.03	3.23	0.80	1434	3.74	2.99	0.80	1514
30	22	4.58	3.11	0.68	1420	4.28	2.91	0.68	1501	3.99	2.71	0.68	1554
30	24	4.83	2.70	0.56	1474	4.54	2.54	0.56	1541	4.28	2.40	0.56	1608
30	26	5.08	2.24	0.44	1528	4.79	2.11	0.44	1595	4.49	1.98	0.44	1662
31	18	4.12	3.95	0.96	1313	3.78	3.63	0.96	1394	3.49	3.35	0.96	1447
31	20	4.33	3.63	0.84	1367	4.03	3.39	0.84	1434	3.74	3.14	0.84	1514
31	22	4.58	3.30	0.72	1420	4.28	3.08	0.72	1501	3.99	2.87	0.72	1554
31	24	4.83	2.90	0.60	1474	4.54	2.72	0.60	1541	4.28	2.57	0.60	1608
31	26	5.08	2.44	0.48	1528	4.79	2.30	0.48	1595	4.49	2.16	0.48	1662
32	18	4.12	4.12	1.00	1313	3.78	3.78	1.00	1394	3.49	3.49	1.00	1447
32	20	4.33	3.81	0.88	1367	4.03	3.55	0.88	1434	3.74	3.29	0.88	1514
32	22	4.58	3.48	0.76	1420	4.28	3.26	0.76	1501	3.99	3.03	0.76	1554
32	24	4.83	3.09	0.64	1474	4.54	2.90	0.64	1541	4.28	2.74	0.64	1608
32	26	5.08	2.64	0.52	1528	4.79	2.49	0.52	1595	4.49	2.34	0.52	1662

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR50VF**

CAPACITY: 5.0 kW

SHF: 0.73

INPUT: 2050 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)															
		21				25				27				30			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	5.88	3.23	0.55	1640	5.63	3.09	0.55	1722	5.40	2.97	0.55	1804	5.20	2.86	0.55	1886
21	20	6.13	2.63	0.43	1722	5.88	2.53	0.43	1825	5.70	2.45	0.43	1866	5.50	2.37	0.43	1948
22	18	5.88	3.47	0.59	1640	5.63	3.32	0.59	1722	5.40	3.19	0.59	1804	5.20	3.07	0.59	1886
22	20	6.13	2.88	0.47	1722	5.88	2.76	0.47	1825	5.70	2.68	0.47	1866	5.50	2.59	0.47	1948
22	22	6.38	2.23	0.35	1784	6.15	2.15	0.35	1896	6.00	2.10	0.35	1948	5.75	2.01	0.35	2030
23	18	5.88	3.70	0.63	1640	5.63	3.54	0.63	1722	5.40	3.40	0.63	1804	5.20	3.28	0.63	1886
23	20	6.13	3.12	0.51	1722	5.88	3.00	0.51	1825	5.70	2.91	0.51	1866	5.50	2.81	0.51	1948
23	22	6.38	2.49	0.39	1784	6.15	2.40	0.39	1896	6.00	2.34	0.39	1948	5.75	2.24	0.39	2030
24	18	5.88	3.94	0.67	1640	5.63	3.77	0.67	1722	5.40	3.62	0.67	1804	5.20	3.48	0.67	1886
24	20	6.13	3.37	0.55	1722	5.88	3.23	0.55	1825	5.70	3.14	0.55	1866	5.50	3.03	0.55	1948
24	22	6.38	2.74	0.43	1784	6.15	2.64	0.43	1896	6.00	2.58	0.43	1948	5.75	2.47	0.43	2030
24	24	6.70	2.08	0.31	1866	6.45	2.00	0.31	1968	6.30	1.95	0.31	2030	6.10	1.89	0.31	2132
25	18	5.88	4.17	0.71	1640	5.63	3.99	0.71	1722	5.40	3.83	0.71	1804	5.20	3.69	0.71	1886
25	20	6.13	3.61	0.59	1722	5.88	3.47	0.59	1825	5.70	3.36	0.59	1866	5.50	3.25	0.59	1948
25	22	6.38	3.00	0.47	1784	6.15	2.89	0.47	1896	6.00	2.82	0.47	1948	5.75	2.70	0.47	2030
25	24	6.70	2.35	0.35	1866	6.45	2.26	0.35	1968	6.30	2.21	0.35	2030	6.10	2.14	0.35	2132
26	18	5.88	4.41	0.75	1640	5.63	4.22	0.75	1722	5.40	4.05	0.75	1804	5.20	3.90	0.75	1886
26	20	6.13	3.86	0.63	1722	5.88	3.70	0.63	1825	5.70	3.59	0.63	1866	5.50	3.47	0.63	1948
26	22	6.38	3.25	0.51	1784	6.15	3.14	0.51	1896	6.00	3.06	0.51	1948	5.75	2.93	0.51	2030
26	24	6.70	2.61	0.39	1866	6.45	2.52	0.39	1968	6.30	2.46	0.39	2030	6.10	2.38	0.39	2132
26	26	6.90	1.86	0.27	1968	6.70	1.81	0.27	2071	6.60	1.78	0.27	2132	6.40	1.73	0.27	2194
27	18	5.88	4.64	0.79	1640	5.63	4.44	0.79	1722	5.40	4.27	0.79	1804	5.20	4.11	0.79	1886
27	20	6.13	4.10	0.67	1722	5.88	3.94	0.67	1825	5.70	3.82	0.67	1866	5.50	3.69	0.67	1948
27	22	6.38	3.51	0.55	1784	6.15	3.38	0.55	1896	6.00	3.30	0.55	1948	5.75	3.16	0.55	2030
27	24	6.70	2.88	0.43	1866	6.45	2.77	0.43	1968	6.30	2.71	0.43	2030	6.10	2.62	0.43	2132
27	26	6.90	2.14	0.31	1968	6.70	2.08	0.31	2071	6.60	2.05	0.31	2132	6.40	1.98	0.31	2194
28	18	5.88	4.88	0.83	1640	5.63	4.67	0.83	1722	5.40	4.48	0.83	1804	5.20	4.32	0.83	1886
28	20	6.13	4.35	0.71	1722	5.88	4.17	0.71	1825	5.70	4.05	0.71	1866	5.50	3.91	0.71	1948
28	22	6.38	3.76	0.59	1784	6.15	3.63	0.59	1896	6.00	3.54	0.59	1948	5.75	3.39	0.59	2030
28	24	6.70	3.15	0.47	1866	6.45	3.03	0.47	1968	6.30	2.96	0.47	2030	6.10	2.87	0.47	2132
28	26	6.90	2.42	0.35	1968	6.70	2.35	0.35	2071	6.60	2.31	0.35	2132	6.40	2.24	0.35	2194
29	18	5.88	5.11	0.87	1640	5.63	4.89	0.87	1722	5.40	4.70	0.87	1804	5.20	4.52	0.87	1886
29	20	6.13	4.59	0.75	1722	5.88	4.41	0.75	1825	5.70	4.28	0.75	1866	5.50	4.13	0.75	1948
29	22	6.38	4.02	0.63	1784	6.15	3.87	0.63	1896	6.00	3.78	0.63	1948	5.75	3.62	0.63	2030
29	24	6.70	3.42	0.51	1866	6.45	3.29	0.51	1968	6.30	3.21	0.51	2030	6.10	3.11	0.51	2132
29	26	6.90	2.69	0.39	1968	6.70	2.61	0.39	2071	6.60	2.57	0.39	2132	6.40	2.50	0.39	2194
30	18	5.88	5.35	0.91	1640	5.63	5.12	0.91	1722	5.40	4.91	0.91	1804	5.20	4.73	0.91	1886
30	20	6.13	4.84	0.79	1722	5.88	4.64	0.79	1825	5.70	4.50	0.79	1866	5.50	4.35	0.79	1948
30	22	6.38	4.27	0.67	1784	6.15	4.12	0.67	1896	6.00	4.02	0.67	1948	5.75	3.85	0.67	2030
30	24	6.70	3.69	0.55	1866	6.45	3.55	0.55	1968	6.30	3.47	0.55	2030	6.10	3.36	0.55	2132
30	26	6.90	2.97	0.43	1968	6.70	2.88	0.43	2071	6.60	2.84	0.43	2132	6.40	2.75	0.43	2194
31	18	5.88	5.58	0.95	1640	5.63	5.34	0.95	1722	5.40	5.13	0.95	1804	5.20	4.94	0.95	1886
31	20	6.13	5.08	0.83	1722	5.88	4.88	0.83	1825	5.70	4.73	0.83	1866	5.50	4.57	0.83	1948
31	22	6.38	4.53	0.71	1784	6.15	4.37	0.71	1896	6.00	4.26	0.71	1948	5.75	4.08	0.71	2030
31	24	6.70	3.95	0.59	1866	6.45	3.81	0.59	1968	6.30	3.72	0.59	2030	6.10	3.60	0.59	2132
31	26	6.90	3.24	0.47	1968	6.70	3.15	0.47	2071	6.60	3.10	0.47	2132	6.40	3.01	0.47	2194
32	18	5.88	5.82	0.99	1640	5.63	5.57	0.99	1722	5.40	5.35	0.99	1804	5.20	5.15	0.99	1886
32	20	6.13	5.33	0.87	1722	5.88	5.11	0.87	1825	5.70	4.96	0.87	1866	5.50	4.79	0.87	1948
32	22	6.38	4.78	0.75	1784	6.15	4.61	0.75	1896	6.00	4.50	0.75	1948	5.75	4.31	0.75	2030
32	24	6.70	4.22	0.63	1866	6.45	4.06	0.63	1968	6.30	3.97	0.63	2030	6.10	3.84	0.63	2132
32	26	6.90	3.52	0.51	1968	6.70	3.42	0.51	2071	6.60	3.37	0.51	2132	6.40	3.26	0.51	2194

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA COOL operation at Rated frequency**

**MUZ-HR50VF**

CAPACITY: 5.0 kW

SHF: 0.73

INPUT: 2050 W

INDOOR DB (°C)	INDOOR WB (°C)	OUTDOOR DB (°C)											
		35				40				46			
		Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT	Q	SHC	SHF	INPUT
21	18	4.90	2.70	0.55	2009	4.50	2.48	0.55	2132	4.15	2.28	0.55	2214
21	20	5.15	2.21	0.43	2091	4.80	2.06	0.43	2194	4.45	1.91	0.43	2317
22	18	4.90	2.89	0.59	2009	4.50	2.66	0.59	2132	4.15	2.45	0.59	2214
22	20	5.15	2.42	0.47	2091	4.80	2.26	0.47	2194	4.45	2.09	0.47	2317
22	22	5.45	1.91	0.35	2173	5.10	1.79	0.35	2296	4.75	1.66	0.35	2378
23	18	4.90	3.09	0.63	2009	4.50	2.84	0.63	2132	4.15	2.61	0.63	2214
23	20	5.15	2.63	0.51	2091	4.80	2.45	0.51	2194	4.45	2.27	0.51	2317
23	22	5.45	2.13	0.39	2173	5.10	1.99	0.39	2296	4.75	1.85	0.39	2378
24	18	4.90	3.28	0.67	2009	4.50	3.02	0.67	2132	4.15	2.78	0.67	2214
24	20	5.15	2.83	0.55	2091	4.80	2.64	0.55	2194	4.45	2.45	0.55	2317
24	22	5.45	2.34	0.43	2173	5.10	2.19	0.43	2296	4.75	2.04	0.43	2378
24	24	5.75	1.78	0.31	2255	5.40	1.67	0.31	2358	5.10	1.58	0.31	2460
25	18	4.90	3.48	0.71	2009	4.50	3.20	0.71	2132	4.15	2.95	0.71	2214
25	20	5.15	3.04	0.59	2091	4.80	2.83	0.59	2194	4.45	2.63	0.59	2317
25	22	5.45	2.56	0.47	2173	5.10	2.40	0.47	2296	4.75	2.23	0.47	2378
25	24	5.75	2.01	0.35	2255	5.40	1.89	0.35	2358	5.10	1.79	0.35	2460
26	18	4.90	3.68	0.75	2009	4.50	3.38	0.75	2132	4.15	3.11	0.75	2214
26	20	5.15	3.24	0.63	2091	4.80	3.02	0.63	2194	4.45	2.80	0.63	2317
26	22	5.45	2.78	0.51	2173	5.10	2.60	0.51	2296	4.75	2.42	0.51	2378
26	24	5.75	2.24	0.39	2255	5.40	2.11	0.39	2358	5.10	1.99	0.39	2460
26	26	6.05	1.63	0.27	2337	5.70	1.54	0.27	2440	5.35	1.44	0.27	2542
27	18	4.90	3.87	0.79	2009	4.50	3.56	0.79	2132	4.15	3.28	0.79	2214
27	20	5.15	3.45	0.67	2091	4.80	3.22	0.67	2194	4.45	2.98	0.67	2317
27	22	5.45	3.00	0.55	2173	5.10	2.81	0.55	2296	4.75	2.61	0.55	2378
27	24	5.75	2.47	0.43	2255	5.40	2.32	0.43	2358	5.10	2.19	0.43	2460
27	26	6.05	1.88	0.31	2337	5.70	1.77	0.31	2440	5.35	1.66	0.31	2542
28	18	4.90	4.07	0.83	2009	4.50	3.74	0.83	2132	4.15	3.44	0.83	2214
28	20	5.15	3.66	0.71	2091	4.80	3.41	0.71	2194	4.45	3.16	0.71	2317
28	22	5.45	3.22	0.59	2173	5.10	3.01	0.59	2296	4.75	2.80	0.59	2378
28	24	5.75	2.70	0.47	2255	5.40	2.54	0.47	2358	5.10	2.40	0.47	2460
28	26	6.05	2.12	0.35	2337	5.70	2.00	0.35	2440	5.35	1.87	0.35	2542
29	18	4.90	4.26	0.87	2009	4.50	3.92	0.87	2132	4.15	3.61	0.87	2214
29	20	5.15	3.86	0.75	2091	4.80	3.60	0.75	2194	4.45	3.34	0.75	2317
29	22	5.45	3.43	0.63	2173	5.10	3.21	0.63	2296	4.75	2.99	0.63	2378
29	24	5.75	2.93	0.51	2255	5.40	2.75	0.51	2358	5.10	2.60	0.51	2460
29	26	6.05	2.36	0.39	2337	5.70	2.22	0.39	2440	5.35	2.09	0.39	2542
30	18	4.90	4.46	0.91	2009	4.50	4.10	0.91	2132	4.15	3.78	0.91	2214
30	20	5.15	4.07	0.79	2091	4.80	3.79	0.79	2194	4.45	3.52	0.79	2317
30	22	5.45	3.65	0.67	2173	5.10	3.42	0.67	2296	4.75	3.18	0.67	2378
30	24	5.75	3.16	0.55	2255	5.40	2.97	0.55	2358	5.10	2.81	0.55	2460
30	26	6.05	2.60	0.43	2337	5.70	2.45	0.43	2440	5.35	2.30	0.43	2542
31	18	4.90	4.66	0.95	2009	4.50	4.28	0.95	2132	4.15	3.94	0.95	2214
31	20	5.15	4.27	0.83	2091	4.80	3.98	0.83	2194	4.45	3.69	0.83	2317
31	22	5.45	3.87	0.71	2173	5.10	3.62	0.71	2296	4.75	3.37	0.71	2378
31	24	5.75	3.39	0.59	2255	5.40	3.19	0.59	2358	5.10	3.01	0.59	2460
31	26	6.05	2.84	0.47	2337	5.70	2.68	0.47	2440	5.35	2.51	0.47	2542
32	18	4.90	4.85	0.99	2009	4.50	4.46	0.99	2132	4.15	4.11	0.99	2214
32	20	5.15	4.48	0.87	2091	4.80	4.18	0.87	2194	4.45	3.87	0.87	2317
32	22	5.45	4.09	0.75	2173	5.10	3.83	0.75	2296	4.75	3.56	0.75	2378
32	24	5.75	3.62	0.63	2255	5.40	3.40	0.63	2358	5.10	3.21	0.63	2460
32	26	6.05	3.09	0.51	2337	5.70	2.91	0.51	2440	5.35	2.73	0.51	2542

**NOTE** Q : Total capacity (kW) SHF : Sensible heat factor DB : Dry-bulb temperature  
 SHC : Sensible heat capacity (kW) INPUT : Total power input (W) WB : Wet-bulb temperature

**PERFORMANCE DATA HEAT operation at Rated frequency**

**MUZ-HR25VF**

CAPACITY: 3.15 kW INPUT: 850W

INDOOR DB (°C)	OUTDOOR WB (°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	1.98	553	2.39	663	2.80	748	3.21	808	3.62	859	4.00	884	4.41	901
21	1.89	595	2.27	706	2.68	782	3.06	842	3.47	884	3.84	910	4.24	944
26	1.70	638	2.11	748	2.49	825	2.90	884	3.31	927	3.69	952	4.10	978

**MUZ-HR35VF**

CAPACITY: 3.60kW INPUT: 975 W

INDOOR DB (°C)	OUTDOOR WB (°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	2.27	634	2.74	761	3.20	858	3.67	926	4.14	985	4.57	1014	5.04	1034
21	2.16	683	2.59	809	3.06	897	3.49	965	3.96	1014	4.39	1043	4.84	1082
26	1.94	731	2.41	858	2.84	946	3.31	1014	3.78	1063	4.21	1092	4.68	1121

**MUZ-HR42VF**

CAPACITY: 4.70 kW INPUT: 1300 W

INDOOR DB (°C)	OUTDOOR WB (°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	2.96	845	3.57	1014	4.18	1144	4.79	1235	5.41	1313	5.97	1352	6.58	1378
21	2.82	910	3.38	1079	4.00	1196	4.56	1287	5.17	1352	5.73	1391	6.32	1443
26	2.54	975	3.15	1144	3.71	1261	4.32	1352	4.94	1417	5.50	1456	6.11	1495

**MUZ-HR50VF**

CAPACITY: 5.40 kW INPUT: 1550 W

INDOOR DB (°C)	OUTDOOR WB (°C)													
	-10		-5		0		5		10		15		20	
	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT	Q	INPUT
15	3.40	1008	4.10	1209	4.81	1364	5.51	1473	6.21	1566	6.86	1612	7.56	1643
21	3.24	1085	3.89	1287	4.59	1426	5.24	1535	5.94	1612	6.59	1659	7.26	1721
26	2.92	1163	3.62	1364	4.27	1504	4.97	1612	5.67	1690	6.32	1736	7.02	1783

**NOTE:** Q: Total capacity (kW) INPUT : Total power input (W) DB: Dry-bulb temperature WB: Wet-bulb temperature

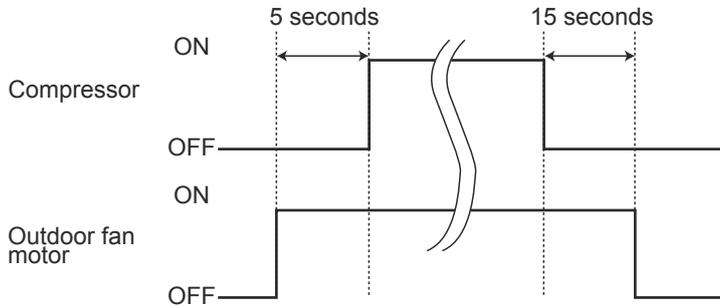
MUZ-HR25VF MUZ-HR35VF MUZ-HR42VF MUZ-HR50VF

10-1. 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.



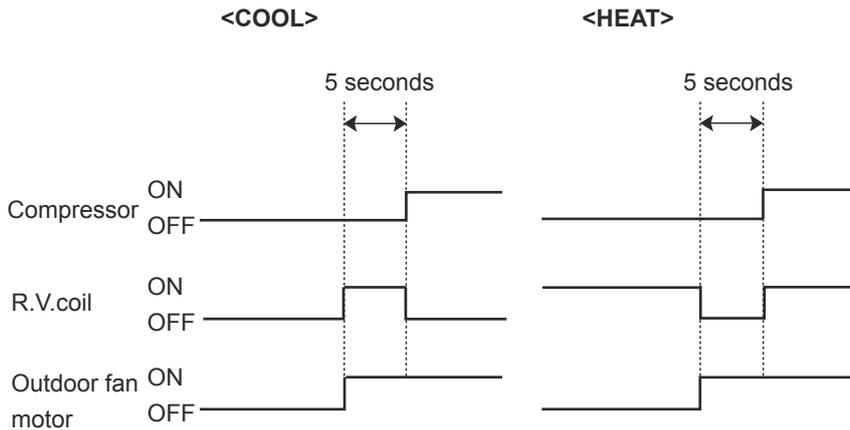
10-2. R.V. COIL CONTROL

Heating . . . . . ON

Cooling . . . . . OFF

Dry . . . . . OFF

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



10-3. RELATION BETWEEN MAIN SENSOR AND ACTUATOR

Sensor	Purpose	Actuator					
		Compressor	LEV	Outdoor fan motor	R.V. coil	Indoor fan motor	Defrost heater
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	○	○	○			
	Heating: Defrosting (Heater)						○
Outdoor heat exchanger temperature thermistor	Cooling: Low ambient temperature operation	○	○	○			
	Cooling: High pressure protection	○	○	○			

**MUZ-HR25VF MUZ-HR35VF MUZ-HR42VF MUZ-HR50VF****11-1. 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 12-6-1.)

Jumper wire		Defrost finish temperature (°C)
JS	Soldered (Initial setting)	5
	None (Cut)	10

**11-2. 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 the discharge temperature thermistor is 20°C or below. When the pre-heat control turns ON, the compressor is energized. (About 50 W)

**Pre-heat control setting**

<JK>

ON: To activate the pre-heat control, cut the JK wire of the inverter P.C. board.

OFF: To deactivate the pre-heat control, solder the JK wire of the inverter P.C. board.

(Refer to 12-6.1)

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

**MUZ-HR25VF MUZ-HR35VF MUZ-HR42VF MUZ-HR50VF**
**12-1. 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 then after confirming the horizontal vane is closed, turn OFF the breaker and/or disconnect the power plug.
- 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 connector housing. DO NOT pull the lead wires.

&lt;Incorrect&gt;



Lead wiring

&lt;Correct&gt;



Connector housing

**3. Troubleshooting procedure**

- 1) Check if the OPERATION INDICATOR lamp on the indoor unit is blinking on and off to indicate an abnormality. To make sure, check how many times the OPERATION INDICATOR lamp is blinking on and off before starting service work.
- 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 12-2 and 12-3.

## 12-2. FAILURE MODE RECALL FUNCTION

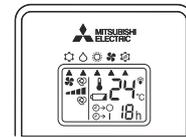
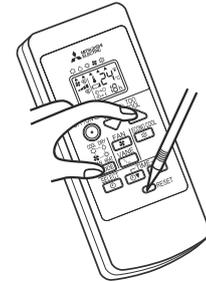
Outline of the function

This air conditioner can memorize the abnormal condition which has occurred once.

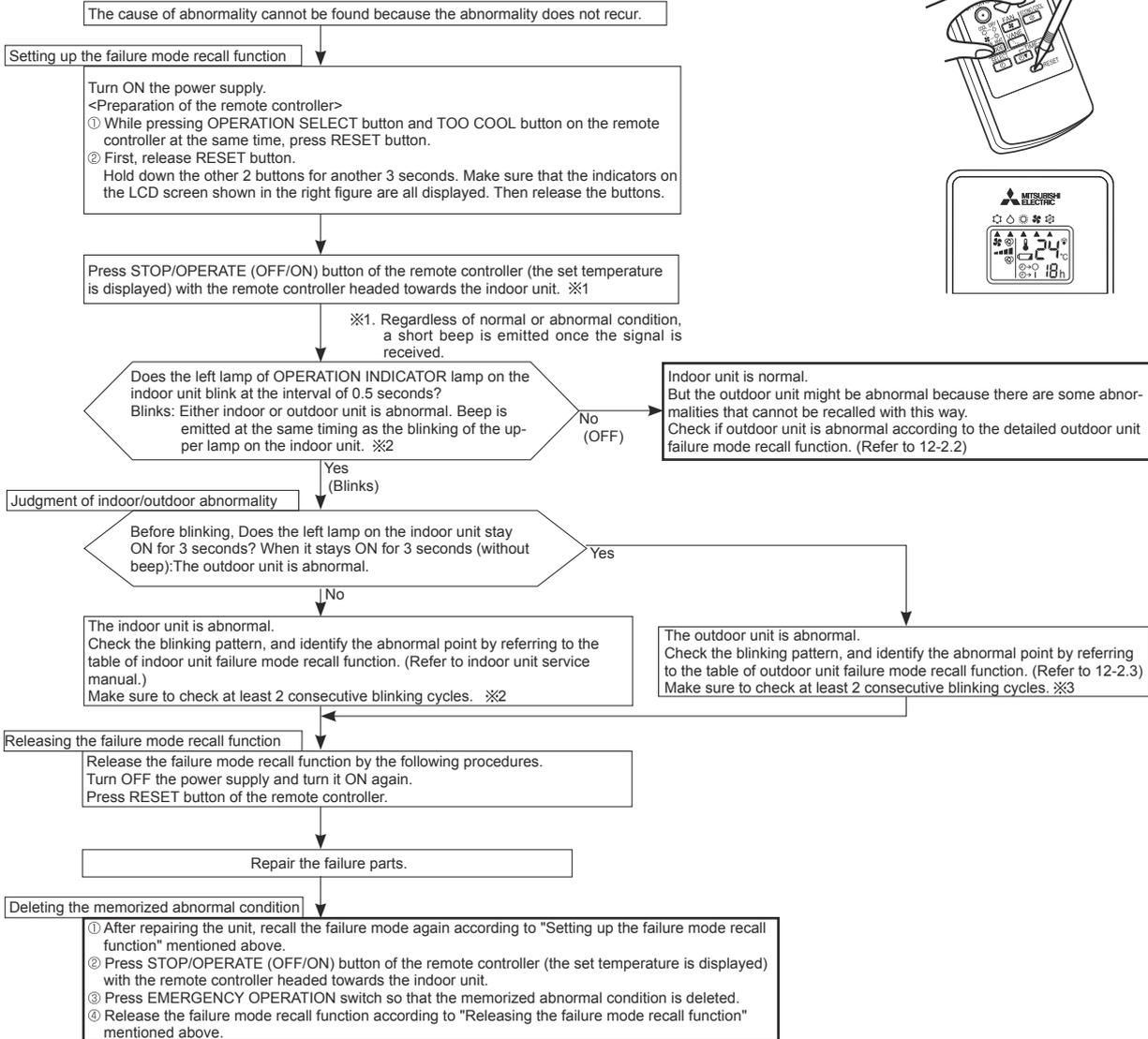
Even though LED indication listed on the troubleshooting check table (12-3.) disappears, the memorized failure details can be recalled.

### 1. Flow chart of failure mode recall function for the indoor/outdoor unit

#### MSZ-HR-VF

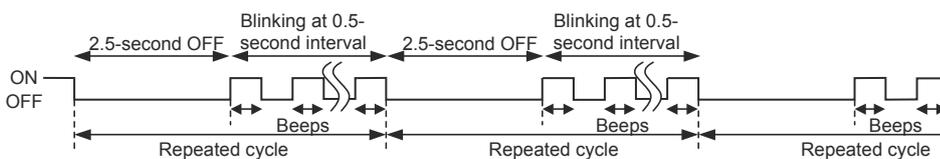


Operational procedure

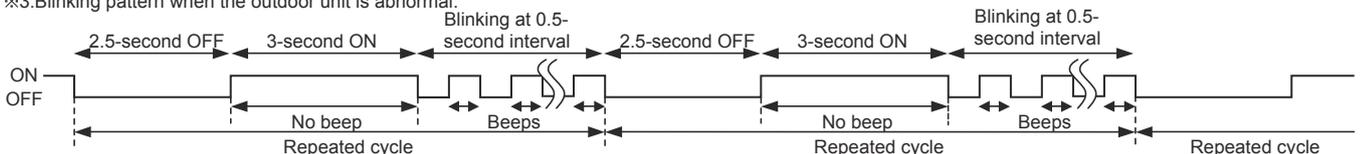


**NOTE:** 1. Make sure to release the failure mode recall function after it is set up, otherwise the unit cannot operate properly.  
2. If the abnormal condition is not deleted from the memory, the last abnormal condition is kept memorized.

※2. Blinking pattern when the indoor unit is abnormal:

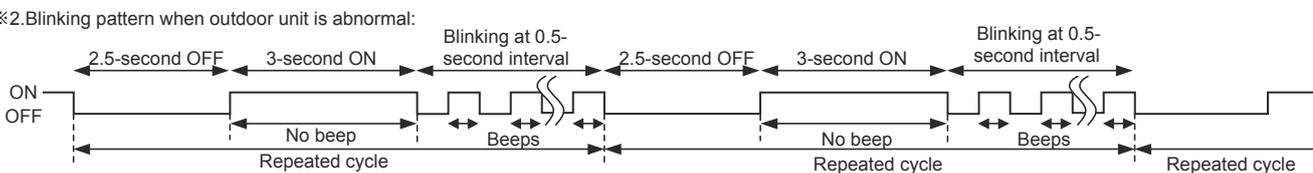
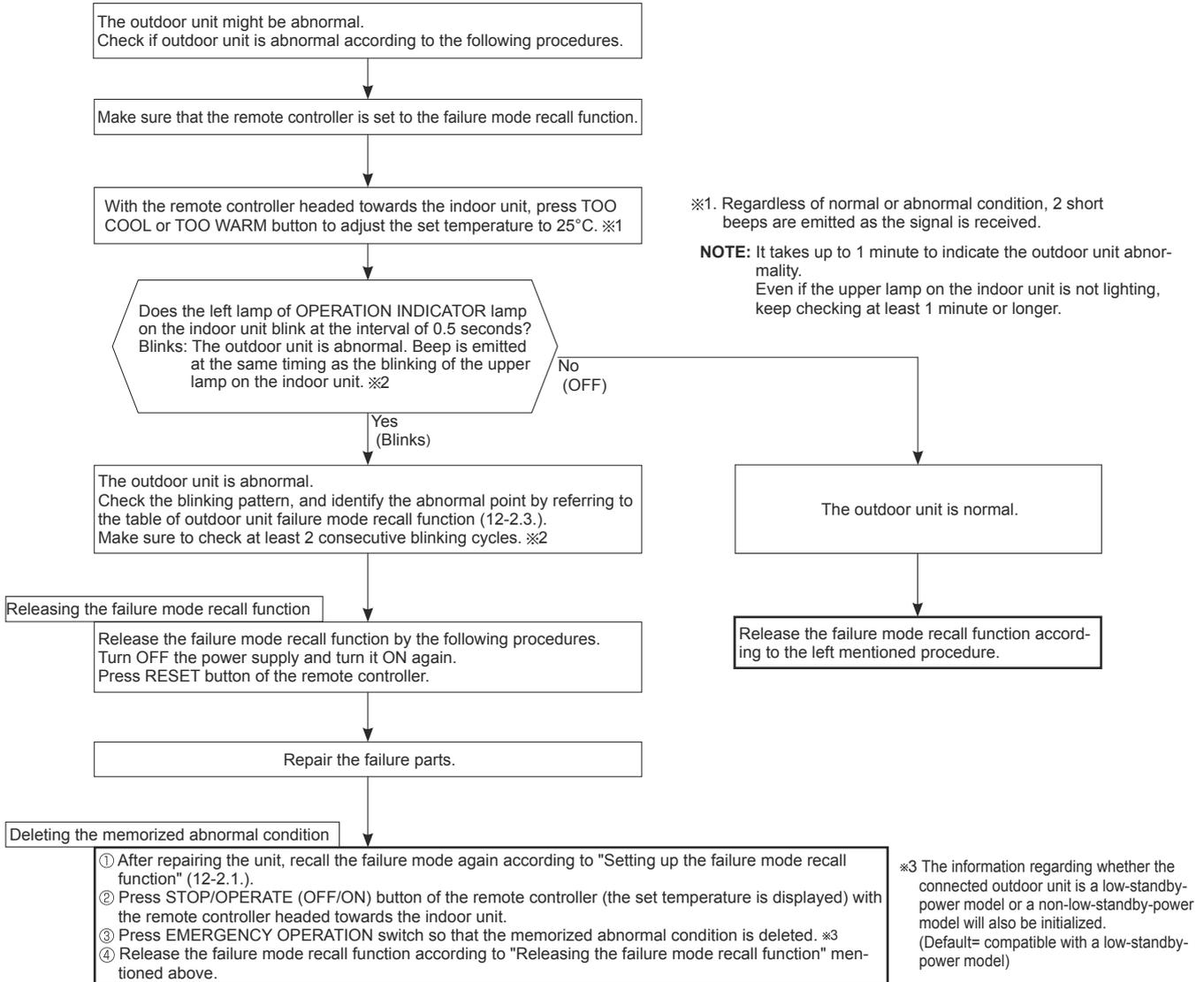


※3. Blinking pattern when the outdoor unit is abnormal:



## 2. Flow chart of the detailed outdoor unit failure mode recall function

### Operational procedure



### 3. Table of outdoor unit failure mode recall function

**NOTE:** Blinking patterns of this mode differ from the ones of TROUBLESHOOTING CHECK TABLE (12-3.).

The left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)	Condition	Remedy	Indoor/outdoor unit failure mode recall function	Outdoor unit failure mode recall function
OFF	None (Normal)	—	—	—	—	—
1-time blink 2.5 seconds OFF	Indoor/outdoor communication, receiving error	—	Any signals from the inverter P.C. board cannot be received normally for 3 minutes.	•Refer to 12-5. ㉔ How to check miswiring and serial signal error.	○	○
	Indoor/outdoor communication, receiving error	—	Although the inverter P.C. board sends signal "0", signal "1" has been received 30 consecutive times.	•Refer to 12-5. ㉔ How to check miswiring and serial signal error.		
2-time blink 2.5 seconds OFF	Outdoor power system	—	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started.	•Reconnect connectors. •Refer to 12-5. ㉔ How to check inverter/compressor". •Check stop valve.	○	○
3-time blink 2.5 seconds OFF	Discharge temperature thermistor	1-time blink every 2.5 seconds	Thermistor shorts or opens during compressor running.	•Refer to 12-5. ㉔ "Check of outdoor thermistors". Defective outdoor thermistors can be identified by checking the blinking pattern of LED.	○	○
	Defrost thermistor	—				
	Fin temperature thermistor	3-time blink 2.5 seconds OFF				
	P.C. board temperature thermistor	4-time blink 2.5 seconds OFF				
	Ambient temperature thermistor	2-time blink 2.5 seconds OFF				
Outdoor heat exchanger temperature thermistor	—					
4-time blink 2.5 seconds OFF	Overcurrent	11-time blink 2.5 seconds OFF	Large current flows into power module (IC700).	•Reconnect compressor connector. •Refer to 12-5. ㉔ How to check inverter/compressor". •Check stop valve.	—	○
	Compressor synchronous abnormality (Compressor start-up failure protection)	12-time blink 2.5 seconds OFF	Waveform of compressor current is distorted.	•Reconnect compressor connector. •Refer to 12-5. ㉔ How to check inverter/compressor".	—	○
5-time blink 2.5 seconds OFF	Discharge temperature	—	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 12-5. ㉔ Check of LEV".	—	○
6-time blink 2.5 seconds OFF	High pressure	—	Temperature of indoor coil thermistor exceeds 70°C in HEAT mode. Temperature of defrost thermistor exceeds 70°C in COOL mode.	•Check refrigerant circuit and refrigerant amount. •Check stop valve.	—	○
7-time blink 2.5 seconds OFF	Fin temperature/P.C. board temperature	7-time blink 2.5 seconds OFF	Temperature of fin temperature thermistor on the inverter P.C. board exceeds 75 ~ 86°C, or temperature of P.C. board temperature thermistor on the inverter P.C. board exceeds 72 ~ 85°C.	•Check around outdoor unit. •Check outdoor unit air passage. •Refer to 12-5. ㉔ Check of outdoor fan motor".	—	○
8-time blink 2.5 seconds OFF	Outdoor fan motor	—	Outdoor fan has stopped 3 times in a row within 30 seconds after outdoor fan startup.	•Refer to 12-5. ㉔ Check of outdoor fan motor". Refer to 12-5. ㉔ Check of inverter P.C. board".	—	○
9-time blink 2.5 seconds OFF	Nonvolatile memory data	5-time blink 2.5 seconds OFF	Nonvolatile memory data cannot be read properly.	•Replace the inverter P.C. board.	○	○
	Power module (IC700)	6-time blink 2.5 seconds OFF	The interface short circuit occurs in the output of the power module (IC700). The compressor winding shorts circuit.	•Refer to 12-5. ㉔ How to check inverter/compressor".		

**NOTE:** Blinking patterns of this mode differ from the ones of TROUBLESHOOTING CHECK TABLE (12-3.).

The left lamp of OPERATION INDICATOR lamp (Indoor unit)	Abnormal point (Failure mode/protection)	LED indication (Outdoor P.C. board)	Condition	Remedy	Indoor/outdoor unit failure mode recall function	Outdoor unit failure mode recall function
10-time blink 2.5 seconds OFF	Discharge temperature	—	Temperature of discharge temperature thermistor has been 50°C or less for 20 minutes.	<ul style="list-style-type: none"> <li>Refer to 12-5.⑧"Check of LEV".</li> <li>Check refrigerant circuit and refrigerant amount.</li> </ul>	—	○
11-time blink 2.5 seconds OFF	Bus-bar voltage (DC)	8-time blink 2.5 seconds OFF	Bus-bar voltage of inverter cannot be detected normally.	<ul style="list-style-type: none"> <li>Refer to 12-5.⑨"How to check inverter/compressor".</li> </ul>	—	○
	Each phase current of compressor	9-time blink 2.5 seconds OFF	Each phase current of compressor cannot be detected normally.			
14-time blink or more 2.5 seconds OFF	Stop valve (Closed valve)	14-time blink 2.5 seconds OFF	Closed valve is detected by compressor current.	<ul style="list-style-type: none"> <li>Check stop valve.</li> </ul>	○	○
	4-way valve/ Pipe temperature	16-time blink 2.5 seconds OFF	The 4-way valve does not work properly. The indoor coil thermistor detects an abnormal temperature.	<ul style="list-style-type: none"> <li>Check the 4-way valve.</li> <li>Replace the inverter P.C. board.</li> </ul>		
	Outdoor refrigerant system abnormality	1-time blink 2.5 seconds OFF	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.	<ul style="list-style-type: none"> <li>Check for a gas leak in a connecting piping etc.</li> <li>Check the stop valve.</li> <li>Refer to 12-5. ⑩ "Check of outdoor refrigerant circuit".</li> </ul>		

### 12-3. TROUBLESHOOTING CHECK TABLE

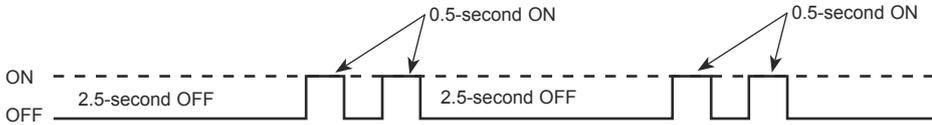
No.	Symptom	LED indication	Abnormal point/ Condition	Condition	Remedy
1	Outdoor unit does not operate.	1-time blink every 2.5 seconds	Outdoor power system	Overcurrent protection cut-out operates 3 consecutive times within 1 minute after the compressor gets started.	<ul style="list-style-type: none"> <li>•Reconnect connector of compressor.</li> <li>•Refer to 12-5.Ⓐ "How to check inverter/compressor".</li> <li>•Check stop valve.</li> </ul>
2			Outdoor thermistors	Discharge temperature thermistor, 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.	•Refer to 12-5.Ⓒ "Check of outdoor thermistors".
3			Outdoor control system	Nonvolatile memory data cannot be read properly. (The left lamp of OPERATION INDICATOR lamp on the indoor unit lights up or blinks 7-time.)	•Replace inverter P.C. board.
4	'Outdoor unit stops and restarts 3 minutes later' is repeated.	6-time blink 2.5 seconds OFF	Serial signal	The communication fails between the indoor and outdoor unit for 3 minutes.	•Refer to 12-5.Ⓜ "How to check miswiring and serial signal error.
5		11-time blink 2.5 seconds OFF	Stop valve/ Closed valve	Closed valve is detected by compressor current.	•Check stop valve.
6		14-time blink 2.5 seconds OFF	Outdoor unit (Other abnormality)	Outdoor unit is defective.	•Refer to 12-2.2. "Flow chart of the detailed outdoor unit failure mode recall function".
7		16-time blink 2.5 seconds OFF	4-way valve/ Pipe temperature	The 4-way valve does not work properly. The indoor coil thermistor detects an abnormal temperature.	<ul style="list-style-type: none"> <li>•Refer to 12-5.Ⓢ "Check of R.V. coil".</li> <li>•Replace the inverter P.C. board.</li> </ul>
8		17-time blink 2.5 seconds OFF	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.	<ul style="list-style-type: none"> <li>•Check for a gas leak in a connecting piping etc.</li> <li>•Check the stop valve.</li> <li>•Refer to 12-5.Ⓝ "Check of outdoor refrigerant circuit".</li> </ul>
9		2-time blink 2.5 seconds OFF	Overcurrent protection	Large current flows into power module (IC700).	<ul style="list-style-type: none"> <li>•Reconnect connector of compressor.</li> <li>•Refer to 12-5.Ⓐ "How to check inverter/compressor".</li> <li>•Check stop valve.</li> </ul>
10		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.	<ul style="list-style-type: none"> <li>•Check refrigerant circuit and refrigerant amount.</li> <li>•Refer to 12-5.Ⓚ "Check of LEV".</li> </ul>
11		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 75 ~ 86°C or temperature of P.C. board temperature thermistor on the inverter P.C. board exceeds 72 ~ 85°C.	<ul style="list-style-type: none"> <li>•Check around outdoor unit.</li> <li>•Check outdoor unit air passage.</li> <li>•Refer to 12-5.Ⓛ "Check of outdoor fan motor".</li> </ul>
12	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.	<ul style="list-style-type: none"> <li>•Check refrigerant circuit and refrigerant amount.</li> <li>•Check stop valve.</li> </ul>	
13	8-time blink 2.5 seconds OFF	Compressor synchronous abnormality	The waveform of compressor current is distorted.	<ul style="list-style-type: none"> <li>•Reconnect connector of compressor.</li> <li>•Refer to 12-5.Ⓐ "How to check inverter/compressor".</li> </ul>	
14	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.	<ul style="list-style-type: none"> <li>•Refer to 12-5.Ⓛ "Check of outdoor fan motor.</li> <li>•Refer to 12-5.Ⓛ "Check of inverter P.C. board.</li> </ul>	
15	12-time blink 2.5 seconds OFF	Each phase current of compressor	Each phase current of compressor cannot be detected normally.	•Refer to 12-5.Ⓐ "How to check inverter/compressor".	
16	13-time blink 2.5 seconds OFF	Bus-bar voltage (DC)	Bus-bar voltage of inverter cannot be detected normally.	<ul style="list-style-type: none"> <li>•It occurs with following case. Instantaneous power voltage drop. (Short time power failure) (HR42/50)</li> <li>•Refer to 12-5.Ⓞ "Check of power supply". (HR42/50)</li> <li>•Refer to 12-5.Ⓐ "How to check inverter/compressor".</li> </ul>	
17	Outdoor unit operates.	1-time blink 2.5 seconds OFF	Frequency drop by current protection	When the input current exceeds approximately 10A, compressor frequency lowers.	<ul style="list-style-type: none"> <li>•The unit is normal, but check the following.</li> <li>•Check if indoor filters are clogged.</li> <li>•Check if refrigerant is short.</li> <li>•Check if indoor/outdoor unit air circulation is short cycled.</li> </ul>
18		3-time blink 2.5 seconds OFF	Frequency drop by high pressure protection	Temperature of indoor coil thermistor exceeds 55°C in HEAT mode, compressor frequency lowers.	
19	4-time blink 2.5 seconds OFF	Frequency drop by defrosting in COOL mode	Indoor coil thermistor reads 8°C or less in COOL mode, compressor frequency lowers.	<ul style="list-style-type: none"> <li>•Check refrigerant circuit and refrigerant amount.</li> <li>•Refer to 12-5.Ⓚ "Check of LEV".</li> <li>•Refer to 12-5.Ⓒ "Check of outdoor thermistors".</li> </ul>	
		Frequency drop by discharge temperature protection	Temperature of discharge temperature thermistor exceeds 111°C, compressor frequency lowers.		
20	5-time blink 2.5 seconds OFF	Outside temperature thermistor protection	When the outside temperature thermistor shorts or opens, protective operation without that thermistor is performed.	•Refer to 12-5.Ⓒ Check of outdoor thermistors.	



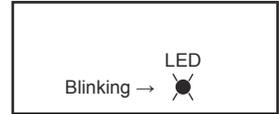
No.	Symptom	LED indication	Abnormal point/ Condition	Condition	Remedy
21	Outdoor unit operates.	7-time blink 2.5 seconds OFF	Low discharge temperature protection	Temperature of discharge temperature thermistor has been 50°C or less for 20 minutes.	<ul style="list-style-type: none"> <li>Refer to 12-5.⑧ "Check of LEV".</li> <li>Check refrigerant circuit and refrigerant amount.</li> </ul>
22		8-time blink 2.5 seconds OFF	PAM protection PAM: Pulse Amplitude Modulation	The overcurrent flows into PFC (Power factor correction: IC820) or the bus-bar voltage reaches 394 V or more, PAM stops and restarts.	This is not malfunction. PAM protection will be activated in the following cases: <ol style="list-style-type: none"> <li>Instantaneous power voltage drop. (Short time power failure)</li> <li>When the power supply voltage is high.</li> </ol>
23		9-time blink 2.5 seconds OFF	Inverter check mode	The connector of compressor is disconnected, inverter check mode starts.	<ul style="list-style-type: none"> <li>Check if the connector of the compressor is correctly connected. Refer to 12-5.⑨ "How to check inverter/compressor".</li> </ul>

**NOTE:** 1. The location of LED is illustrated at the right figure. Refer to 12-6.1.  
 2. LED is lighted during normal operation.

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



Inverter P.C. board

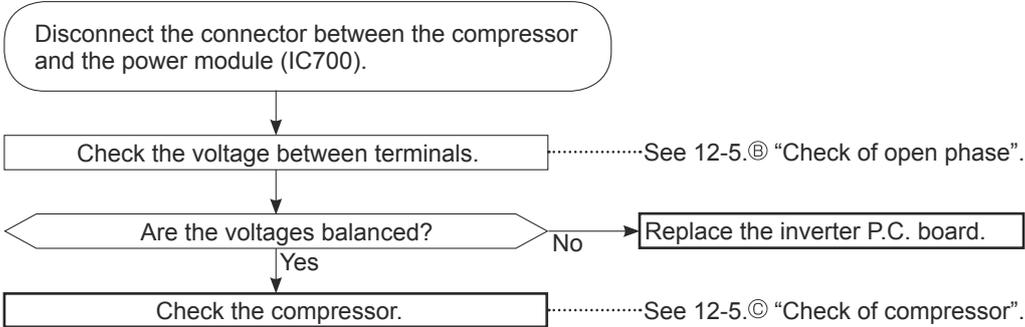


## 12-4. TROUBLE CRITERION OF MAIN PARTS

Part name	Check method and criterion	Figure										
Defrost thermistor (RT61) Fin temperature thermistor (RT64) Ambient temperature thermistor (RT65) Outdoor heat exchanger temperature thermistor (RT68)	Measure the resistance with a tester.  Refer to 12-6. "Test point diagram and voltage", 1. "Inverter P.C. board", for the chart of thermistor.											
Discharge temperature thermistor (RT62)	Measure the resistance with a tester. Before measurement, hold the thermistor with your hands to warm it up.  Refer to 12-6. "Test point diagram and voltage", 1. "Inverter P.C. board", for the chart of thermistor.											
Compressor	Measure the resistance between terminals using a tester. (Temperature: -10 ~ 40°C) <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Normal (Ω)</th> </tr> <tr> <th>MUZ-HR25/35VF</th> <th>MUZ-HR42/50VF</th> </tr> </thead> <tbody> <tr> <td>U-V</td> <td rowspan="3">1.59 ~ 2.16</td> <td rowspan="3">0.82 ~ 1.11</td> </tr> <tr> <td>U-W</td> </tr> <tr> <td>V-W</td> </tr> </tbody> </table>		Normal (Ω)		MUZ-HR25/35VF	MUZ-HR42/50VF	U-V	1.59 ~ 2.16	0.82 ~ 1.11	U-W	V-W	
	Normal (Ω)											
	MUZ-HR25/35VF	MUZ-HR42/50VF										
U-V	1.59 ~ 2.16	0.82 ~ 1.11										
U-W												
V-W												
Outdoor fan motor	Measure the resistance between lead wires using a tester. (Temperature: -10 ~ 40°C) <table border="1"> <thead> <tr> <th rowspan="2">Color of lead wire</th> <th colspan="2">Normal (Ω)</th> </tr> <tr> <th>MUZ-HR25/35VF</th> <th>MUZ-HR42/50VF</th> </tr> </thead> <tbody> <tr> <td>RED – BLK</td> <td rowspan="3">32 ~ 43</td> <td rowspan="3">15 ~ 20</td> </tr> <tr> <td>BLK – WHT</td> </tr> <tr> <td>WHT – RED</td> </tr> </tbody> </table>	Color of lead wire	Normal (Ω)		MUZ-HR25/35VF	MUZ-HR42/50VF	RED – BLK	32 ~ 43	15 ~ 20	BLK – WHT	WHT – RED	
Color of lead wire	Normal (Ω)											
	MUZ-HR25/35VF	MUZ-HR42/50VF										
RED – BLK	32 ~ 43	15 ~ 20										
BLK – WHT												
WHT – RED												
R. V. coil (21S4)	Measure the resistance using a tester. (Temperature: -10 ~ 40°C) <table border="1"> <thead> <tr> <th>Normal (kΩ)</th> </tr> </thead> <tbody> <tr> <td>1.41 ~ 2.00</td> </tr> </tbody> </table>	Normal (kΩ)	1.41 ~ 2.00									
Normal (kΩ)												
1.41 ~ 2.00												
Expansion valve coil (LEV)	Measure the resistance using a tester. (Temperature: -10 ~ 40°C) <table border="1"> <thead> <tr> <th>Color of lead wire</th> <th>Normal (Ω)</th> </tr> </thead> <tbody> <tr> <td>RED – ORN</td> <td rowspan="4">37 ~ 54</td> </tr> <tr> <td>RED – WHT</td> </tr> <tr> <td>RED – BLU</td> </tr> <tr> <td>RED – YLW</td> </tr> </tbody> </table>	Color of lead wire	Normal (Ω)	RED – ORN	37 ~ 54	RED – WHT	RED – BLU	RED – YLW				
Color of lead wire	Normal (Ω)											
RED – ORN	37 ~ 54											
RED – WHT												
RED – BLU												
RED – YLW												

## 12-5. TROUBLESHOOTING FLOW

### A How to check inverter/compressor



### B Check of open phase

- With the connector between the compressor and the power module (IC700) 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 >>

Start cooling or heating operation by pressing EMERGENCY OPERATION switch on the indoor unit. (TEST RUN OPERATION: Refer to 9-3.)

#### << Measurement point >>

At 3 points

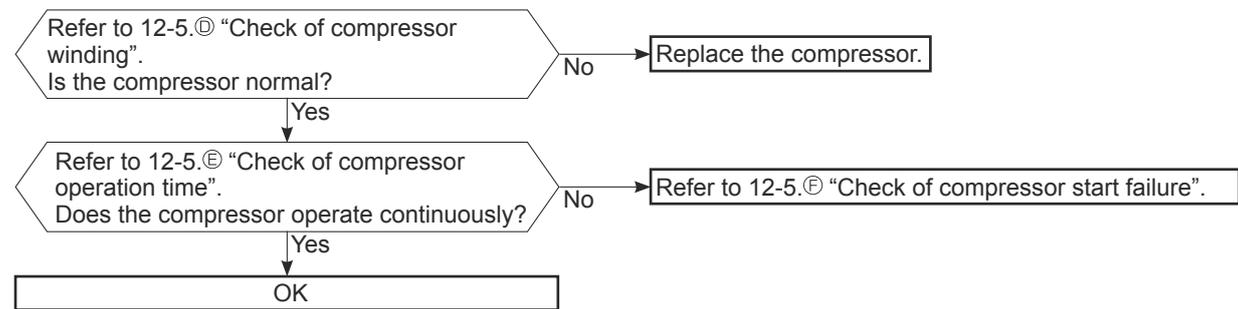
BLK (U)-WHT (V) ※ Measure AC voltage between the lead wires at 3 points.

BLK (U)-RED (W)

WHT(V)-RED (W)

- 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 12-6.1.)

### C Check of compressor



## D Check of compressor winding

- Disconnect the connector between the compressor and the power module (IC700), and measure the resistance between the compressor terminals.

<<Measurement point>>

At 3 points

BLK-WHT

BLK-RED

WHT-RED

※ Measure the resistance between the lead wires at 3 points.

<<Judgement>>

Refer to 12-4.

0 [ $\Omega$ ] .....Abnormal [short]

Infinite [ $\Omega$ ] .....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 overcurrent.

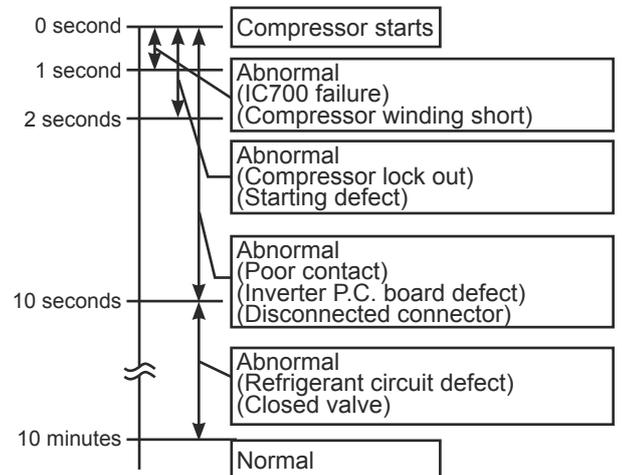
<<Operation method>>

Start heating or cooling operation by pressing EMERGENCY OPERATION switch on the indoor unit. (TEST RUN OPERATION: Refer to 9-3.)

<<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 12-5.⑥)

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 11-2. "PRE-HEAT CONTROL SETTING")



※1

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

## Ⓒ Check of outdoor thermistors

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

Is the resistance of thermistor normal?  
(Refer to 12-6.1.)

No

Replace the thermistor except RT64.  
When RT64 is abnormal, replace the inverter P.C. board.

Yes

Reconnect the connector of thermistor.  
Turn ON the power supply and press EMERGENCY OPERATION switch.

Does the unit operate for 10 minutes or more  
without showing thermistor abnormality?

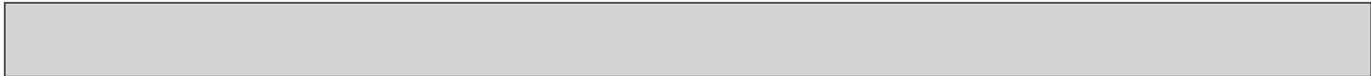
No

Replace the inverter P.C. board.

Yes

OK (Cause is poor contact.)

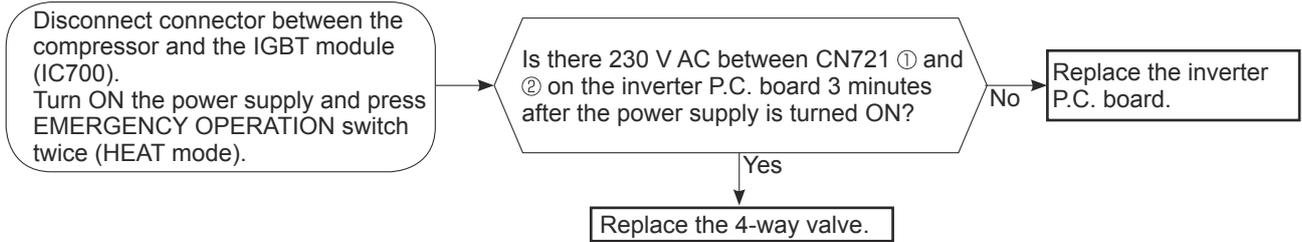
Thermistor	Symbol	Connector, Pin No.	Board
Defrost	RT61	Between CN641 pin1 and pin2	Inverter P.C. board
Discharge temperature	RT62	Between CN641 pin3 and pin4	
Fin temperature	RT64	Between CN642 pin1 and pin2	
Ambient temperature	RT65	Between CN643 pin1 and pin2	
Outdoor heat exchanger temperature	RT68	Between CN644 pin1 and pin3	



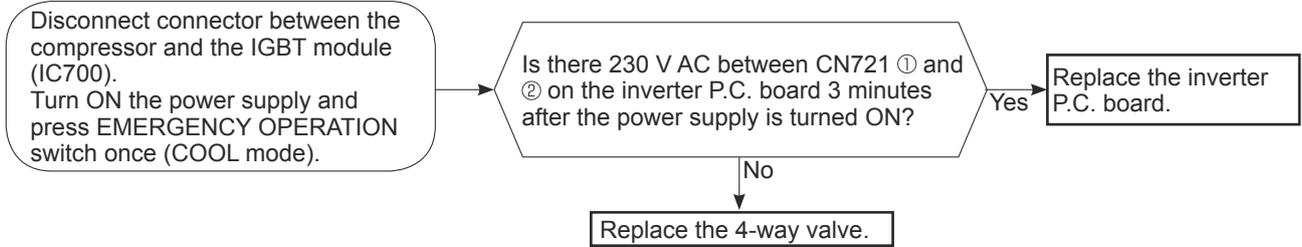
**H Check of R.V. coil**

- \* First of all, measure the resistance of R.V. coil to check if the coil is defective. Refer to 12-4.
- \* In case CN721 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 CN721 is connected.

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



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



### ① Check of outdoor fan motor

Disconnect the connectors CN931 and CN932 from the inverter P.C. board.  
Check the connection between the connector CN931 and CN932.

Is the resistance between each terminal of outdoor fan motor normal?  
(Refer to 12-4.)

Yes

Disconnect CN932 from the inverter P.C. board, and turn on the power supply.

Rotate the outdoor fan motor manually and measure the voltage of CN931.  
Between 1(+) and 5(-)  
Between 2(+) and 5(-)  
Between 3(+) and 5(-)

Does the voltage between each terminal become 5 and 0 V DC repeatedly?

No

(Fixed to either 5 or 0 V DC)

Yes

Does the outdoor fan motor rotate smoothly?

No

Yes

Replace the outdoor fan motor.

Replace the inverter P.C. board.

**J Check of power supply**

Disconnect the connector between the compressor and the power module (IC700). Turn ON power supply and press EMERGENCY OPERATION switch.

Does the left lamp of OPERATION INDICATOR lamp on the indoor unit light up?

Yes

Is there bus-bar voltage 260 - 370 V DC between DB61 (+) and DB61 (-) on the inverter P.C. board? (Refer to 12-6.1.)

No

Check the electric parts in main circuit.

No

Is there voltage 230 V AC between the indoor terminal block S1 and S2?

Yes

Rectify indoor/outdoor connecting wire.

No

Replace the indoor electronic control P.C. board.

Yes

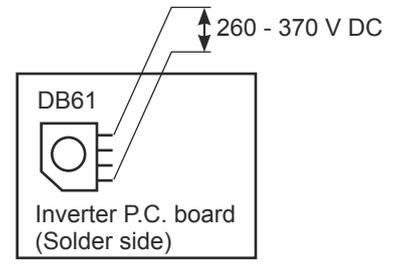
Does LED on the inverter P.C. board light up or blink? (Refer to 12-6.1.)

No

Replace the inverter P.C. board.

Yes

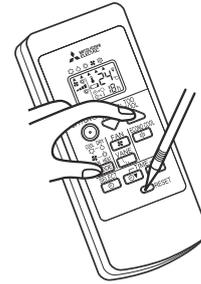
If lights up, OK.  
If blinks, refer to 12-3.



## K Check of LEV (Expansion valve)

Turn ON the power supply.  
 <Preparation of the remote controller>  
 ① While pressing both OPERATION SELECT button and TOO COOL button on the remote controller at the same time, press RESET button.  
 ② First, release RESET button.  
 Hold down the other 2 buttons for another 3 seconds. Make sure that the indicators on the LCD screen shown in the right figure are all displayed. Then release the buttons.

MSZ-HR-VF



Press STOP/OPERATE (OFF/ON) button of the remote controller (the set temperature is displayed) with the remote controller headed towards the indoor unit. ※1

Expansion valve operates in full-opening direction.

Do you hear the expansion valve "click, click....." ?  
 Do you feel the expansion valve vibrate when touching it ?

Yes → OK

No

Is LEV coil properly fixed to the expansion valve?

No

Properly fix the LEV coil to the expansion valve.

Yes

Does the resistance of LEV coil have the characteristics? (Refer to 12-4.)

Yes

Measure each voltage between connector pins of CN724 on the inverter P.C. board.  
 1. Pin③(-) — Pin①(+)  
 2. Pin④(-) — Pin①(+)  
 3. Pin⑤(-) — Pin①(+)  
 4. Pin⑥(-) — Pin①(+)  
 Is there about 3 - 5 V AC between each?  
**NOTE:** Measure the voltage by an analog tester.

No → Replace the inverter P.C. board.

No

Replace the LEV coil.

Yes

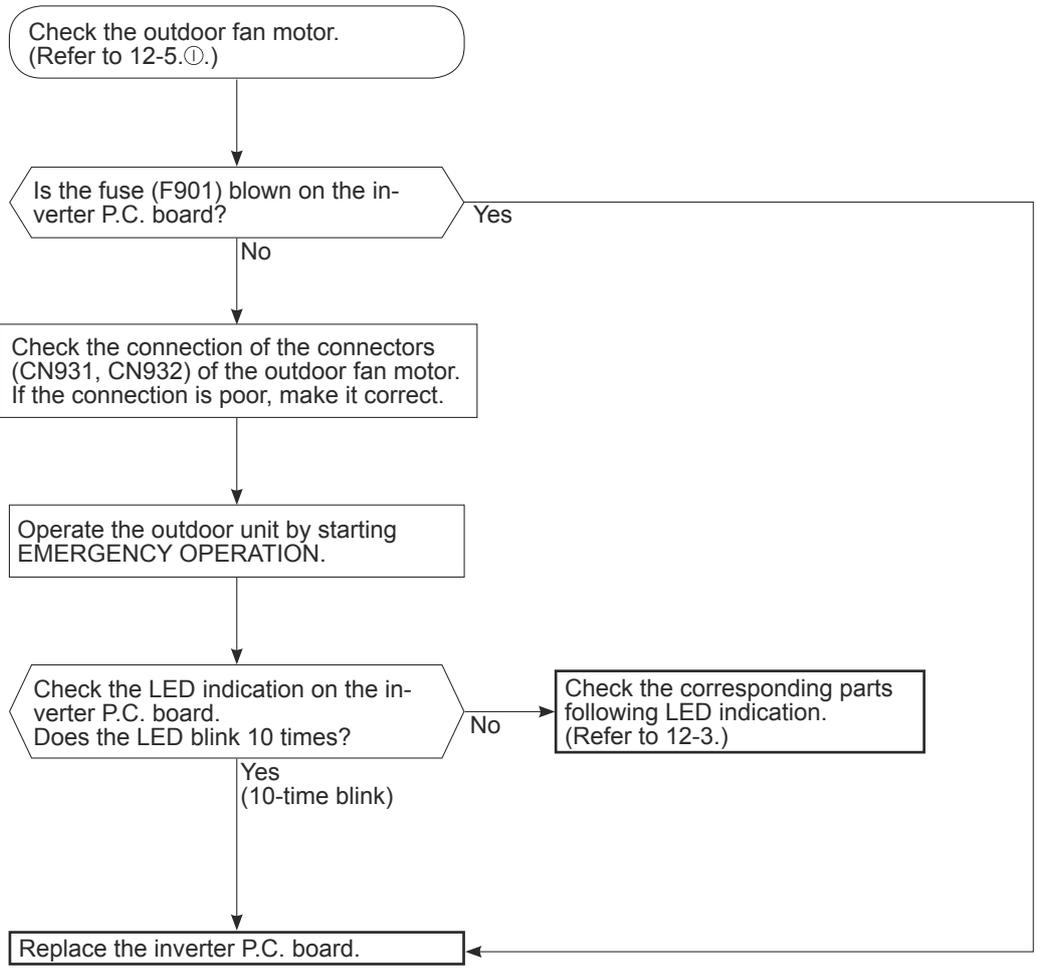
Replace the expansion valve.

※1. Regardless of normal or abnormal condition, a short beep is emitted once the signal is received.

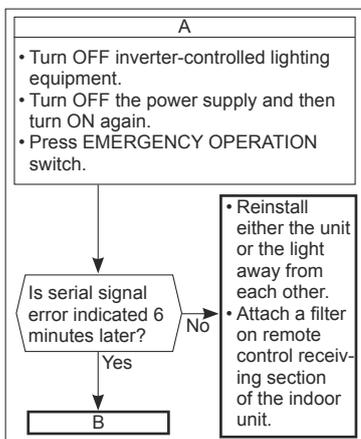
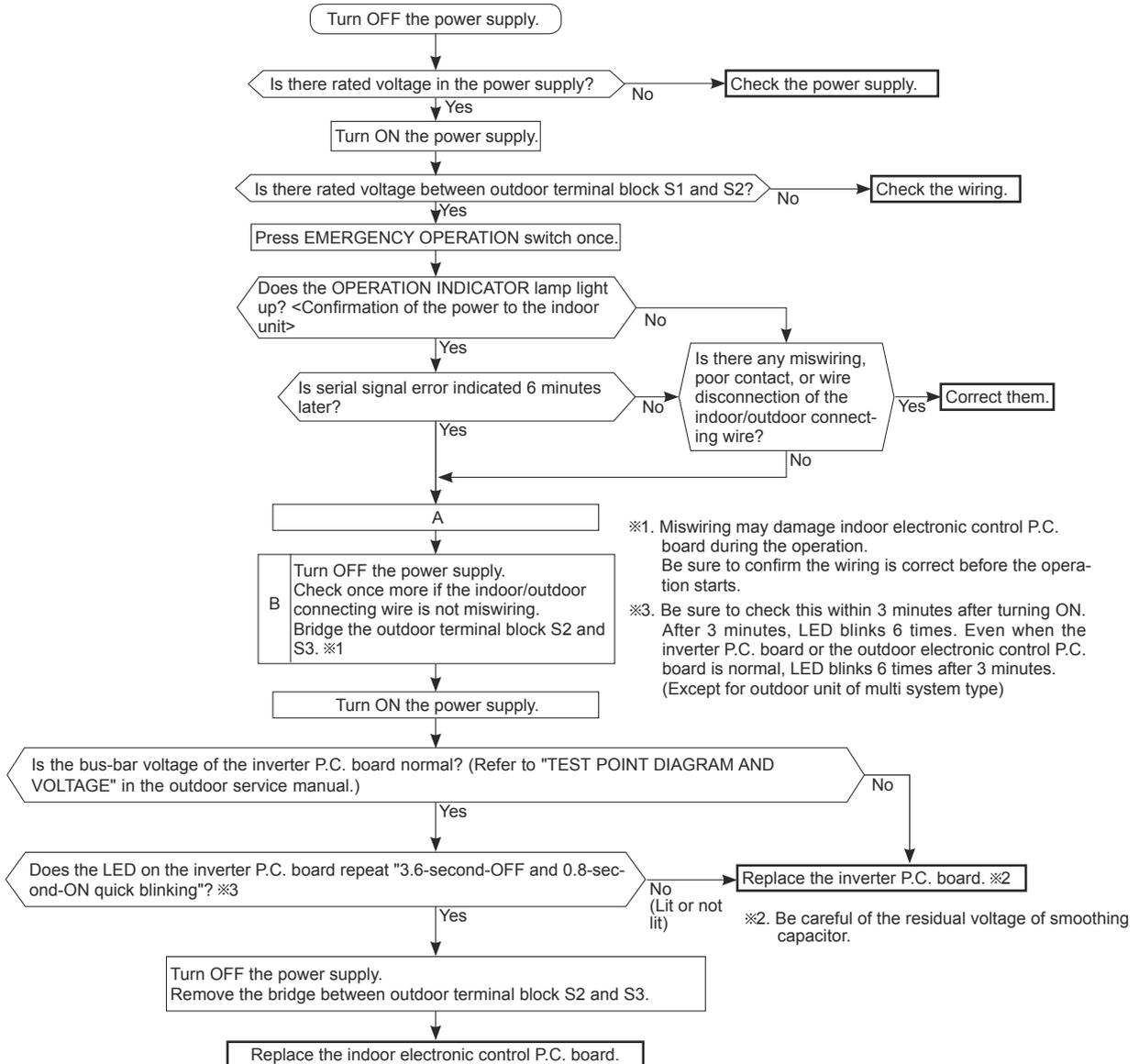
**NOTE:** After check of LEV, do the undermentioned operations.

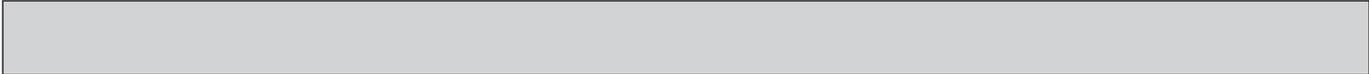
1. Turn OFF the power supply and turn it ON again.
2. Press RESET button on the remote controller.

**L Check of inverter P.C. board**

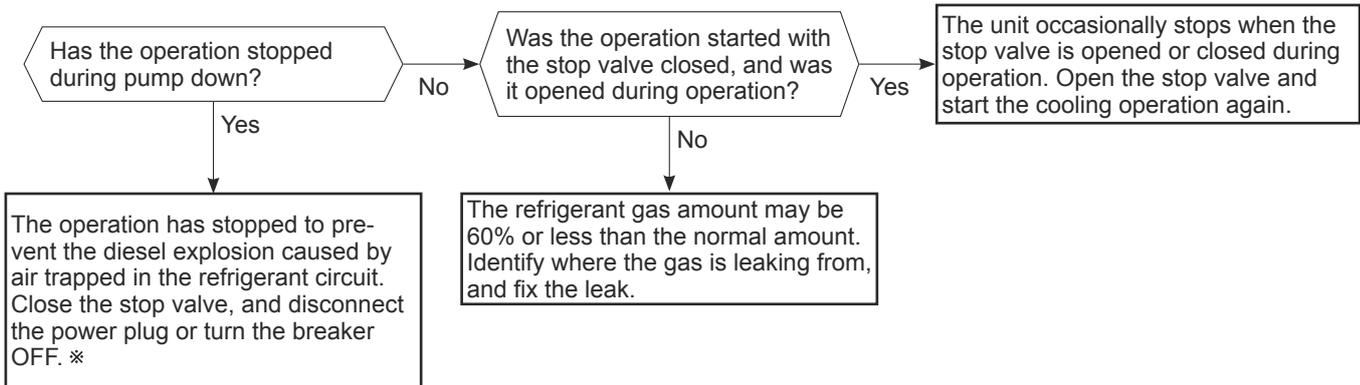


## M How to check miswiring and serial signal error



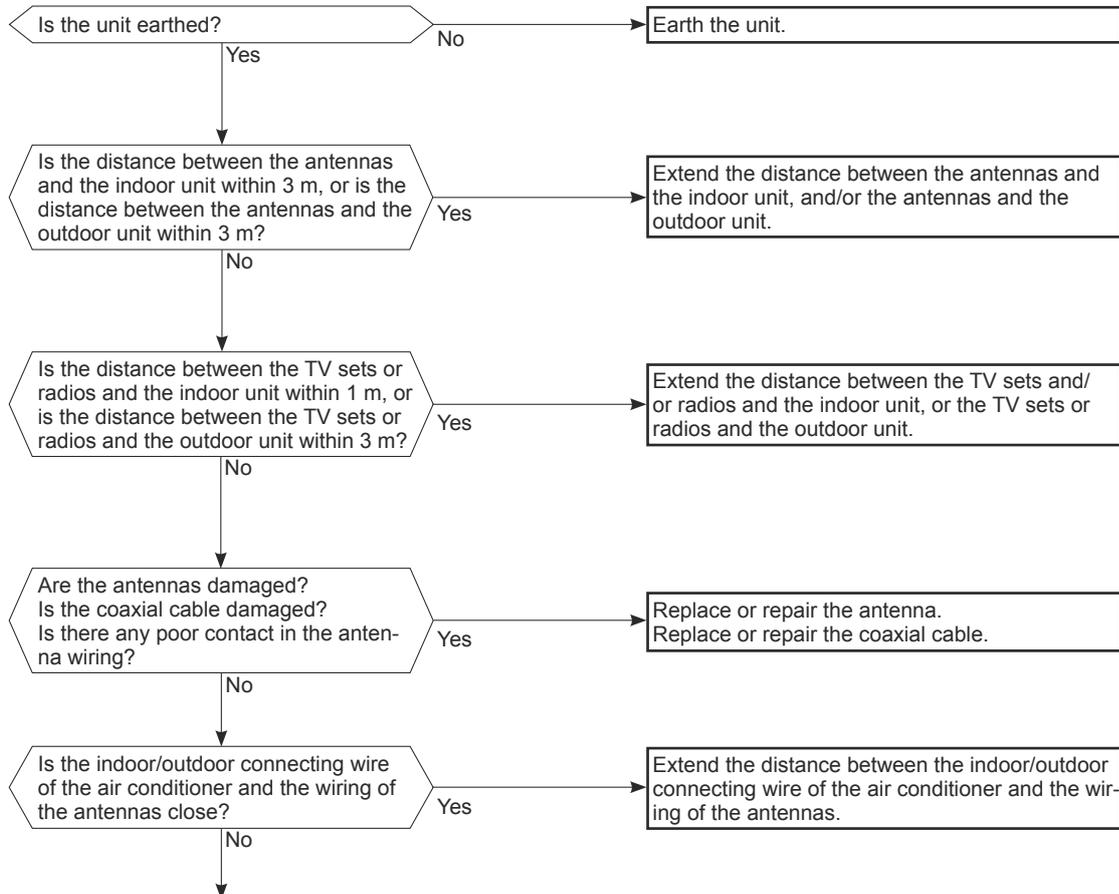


**N Check of the outdoor refrigerant circuit**



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

## ⊙ Electromagnetic noise enters into TV sets or radios



Even if all of the above conditions are fulfilled, the electromagnetic noise may enter, depending on the electric field strength or the installation condition (combination of specific conditions such as antennas or wiring).  
Check the following before asking for service.

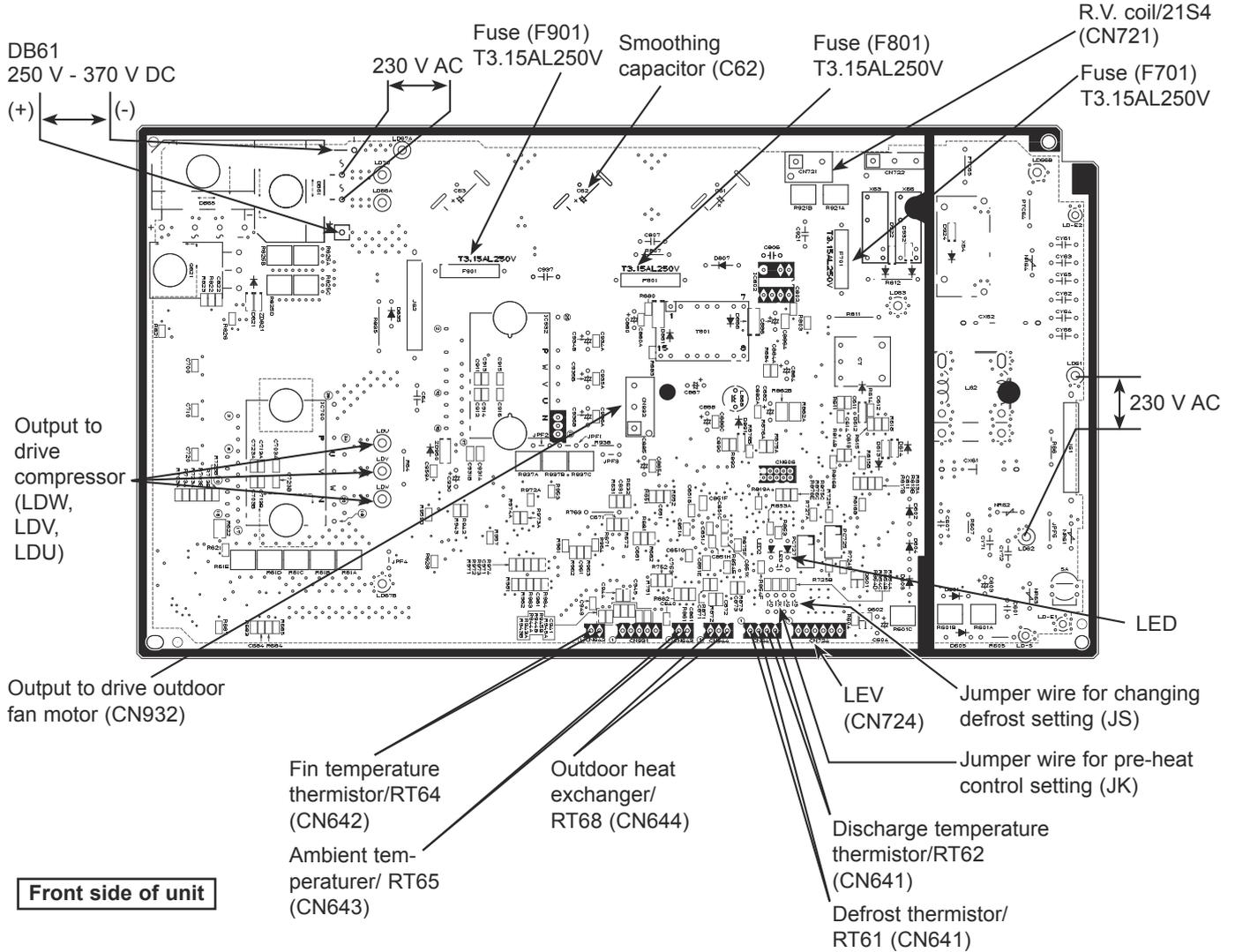
1. Devices affected by the electromagnetic noise  
TV sets, radios (FM/AM broadcast, shortwave)
2. Channel, frequency, broadcast station affected by the electromagnetic noise
3. Channel, frequency, broadcast station unaffected by the electromagnetic noise
4. Layout of:  
indoor/outdoor unit of the air conditioner, indoor/outdoor wiring, earth wire, antennas, wiring from antennas, receiver
5. Electric field intensity of the broadcast station affected by the electromagnetic noise
6. Presence or absence of amplifier such as booster
7. Operation condition of air conditioner when the electromagnetic noise enters in
  - 1) Turn OFF the power supply once, and then turn ON the power supply. In this situation, check for the electromagnetic noise.
  - 2) Within 3 minutes after turning ON the power supply, press STOP/OPERATE (OFF/ON) button on the remote controller for power ON, and check for the electromagnetic noise.
  - 3) After a short time (3 minutes later after turning ON), the outdoor unit starts running. During operation, check for the electromagnetic noise.
  - 4) Press STOP/OPERATE (OFF/ON) button on the remote controller for power OFF, when the outdoor unit stops but the indoor/outdoor communication still runs on. In this situation, check for the electromagnetic noise.

## 12-6. TEST POINT DIAGRAM AND VOLTAGE

### 1. Inverter P.C. board

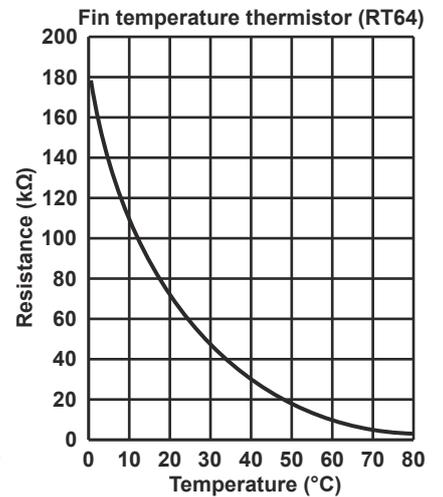
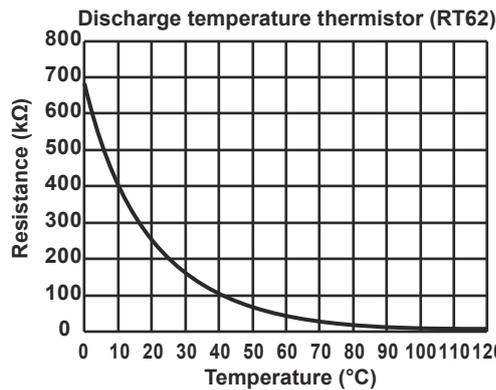
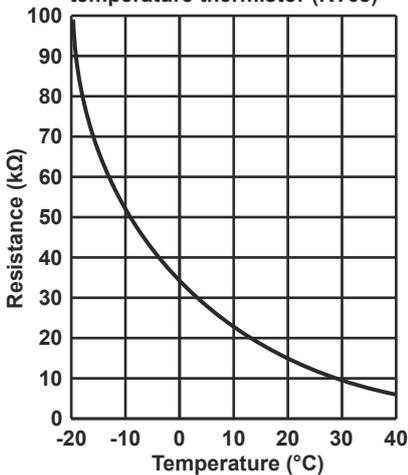
#### MUZ-HR25VF MUZ-HR35VF

Back side of unit



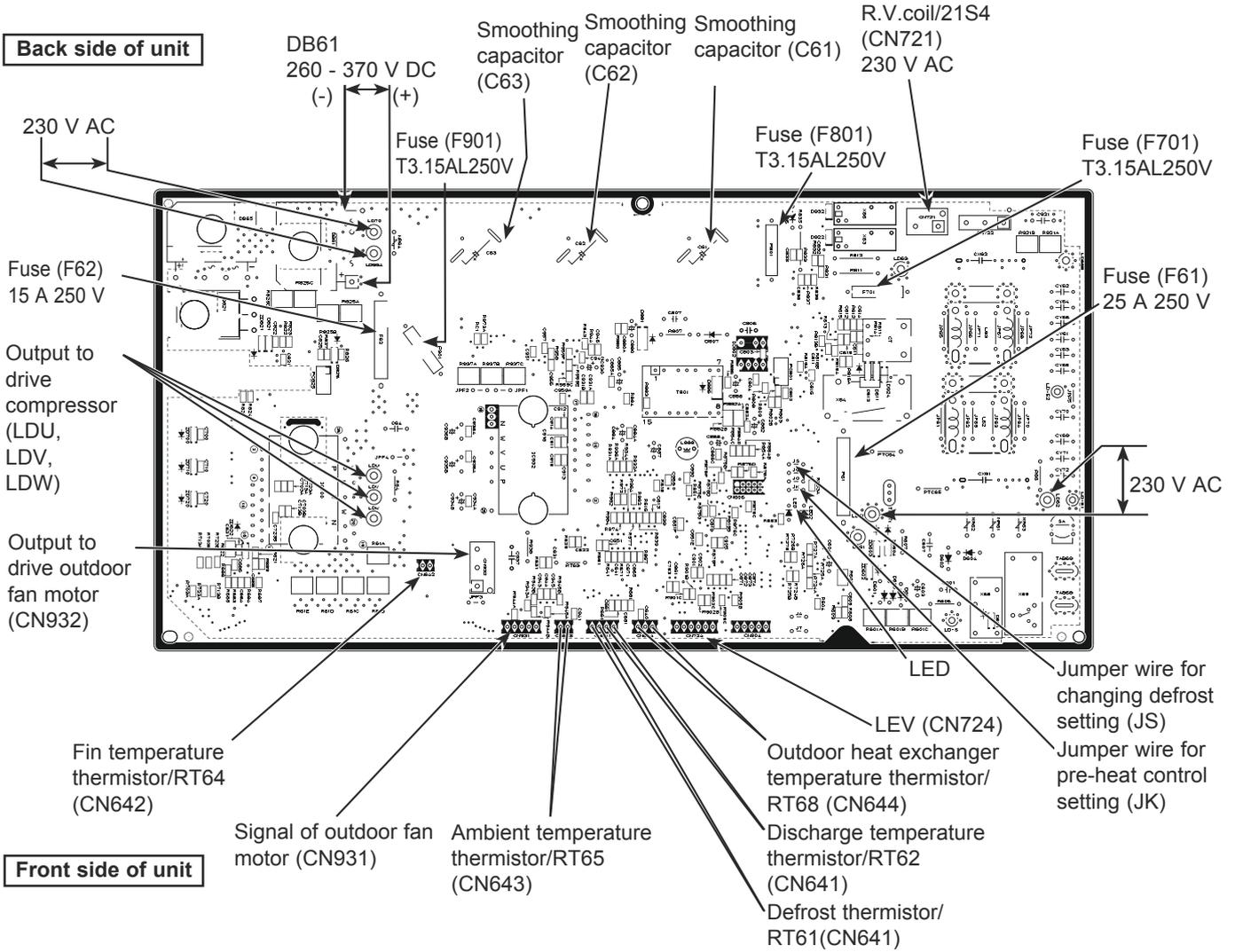
Front side of unit

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

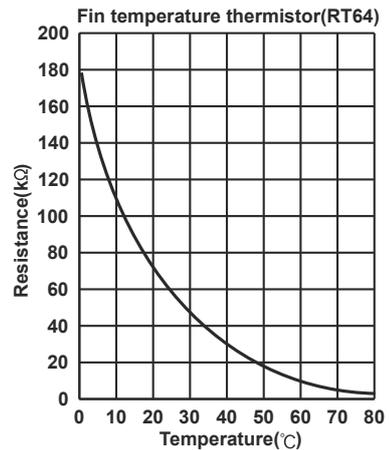
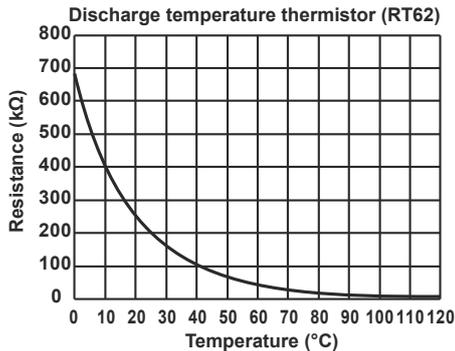
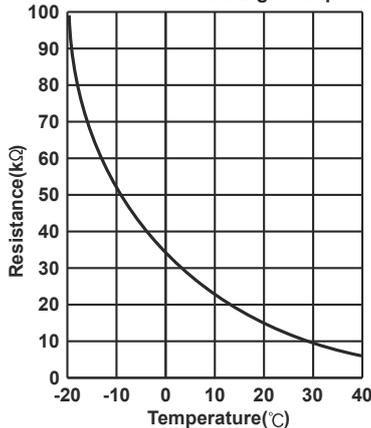


1. Inverter P.C. board

MUZ-HR42VF MUZ-HR50VF



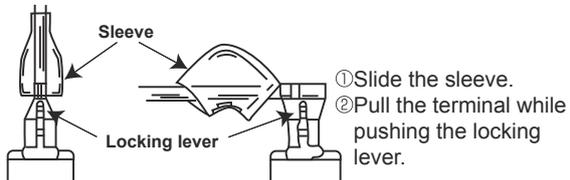
Defrost thermistor(RT61)  
Ambient temperature thermistor(RT65)  
Outdoor heat exchanger temperature thermistor(RT68)



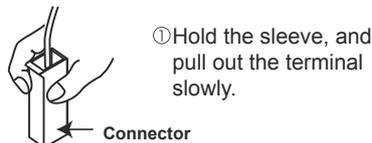
<Detaching method of the terminal with locking mechanism >

The terminal which has the locking mechanism can be detached as shown below.  
 There are following 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 this connector shown below has the locking mechanism.



13-1. MUZ-HR25VF MUZ-HR35VF

NOTE: Turn OFF the power supply before disassembly.

→ : Indicates the visible parts in the photos.  
 ---→ : Indicates the invisible parts in the photos.

OPERATING PROCEDURE	PHOTOS
<p><b>1. Removing the cabinet and the panels</b></p> <ol style="list-style-type: none"> <li>(1) Remove the screws fixing the service panel.</li> <li>(2) Pull down the service panel and remove it.</li> <li>(3) Disconnect the power supply and indoor/outdoor connecting wire.</li> <li>(4) Remove the screws fixing the top panel.</li> <li>(5) Remove the top panel.</li> <li>(6) Remove the screws fixing the cabinet and the motor support.</li> <li>(7) Remove the cabinet.</li> <li>(8) Remove the fixing screws of the terminal block support and the back panel. (Photo 4)</li> <li>(9) Remove the screws fixing the back panel.</li> <li>(10) Remove the back panel.</li> </ol> <p><b>Photo 2</b></p> <p>Screws of the top panel              Direction to remove              Screws of the service panel              Hooks              Screw of the cabinet</p>	<p><b>Photo 1</b></p> <p>Screws of the top panel              Screws of the motor support              Screws of the cabinet</p> <p><b>Photo 3</b></p> <p>Screws of the back panel</p>

## OPERATING PROCEDURE

### 2. Removing the inverter assembly, inverter P.C. board

- (1) Remove the cabinet and the panels. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the following connectors:
  - <Inverter P.C. board>
  - CN721 (R.V. coil)
  - CN931, CN932 (Fan motor)
  - CN641 (Defrost thermistor and discharge temperature thermistor)
  - CN643 (Ambient temperature thermistor)
  - CN644 (Outdoor heat exchanger temperature thermistor)
  - CN724 (LEV)
- (3) Remove the compressor connector (CN61).
- (4) Remove the screw fixing the heat sink support and the separator.
- (5) Remove the inverter assembly.
- (6) Remove the screws of the earth wire and the terminal block support.
- (7) Remove the screw of the terminal block and remove the terminal block.
- (8) Remove the heat sink support from the P.C. board support.
- (9) Unhook the catch of the inverter P.C. board and remove the inverter P.C. board from the P.C. board support.

### 3. Removing the R.V. coil

- (1) Remove the cabinet and the panels. (Refer to section 1.)
- (2) Disconnect the following connectors:
  - <Inverter P.C. board>
  - CN721 (R.V. coil)
- (3) Remove the R.V. coil.

## PHOTOS

Photo 4

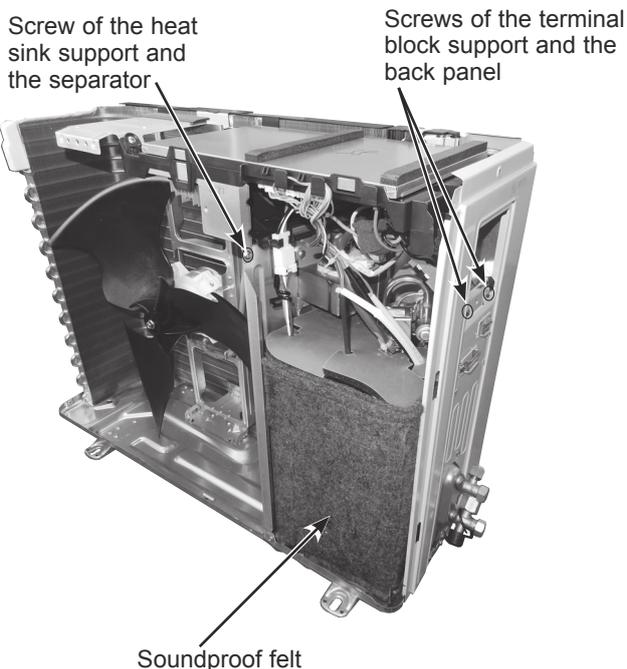
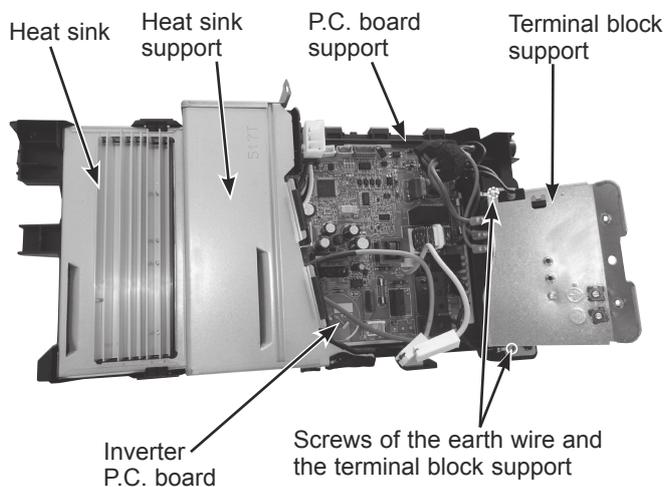


Photo 5 (Inverter assembly)



## OPERATING PROCEDURE

### 4. Removing the discharge temperature thermistor, the defrost thermistor, the ambient temperature thermistor and the outdoor heat exchanger temperature thermistor

- (1) Remove the cabinet and the panels. (Refer to section 1.)
- (2) Disconnect the lead wire to the reactor and the following connectors:  
<Inverter P.C. board>  
CN641 (Defrost thermistor and discharge temperature thermistor)  
CN643 (Ambient temperature thermistor)  
CN644 (Outdoor heat exchanger temperature thermistor)
- (3) Pull out the discharge temperature thermistor from its holder.
- (4) Pull out the defrost thermistor from its holder. (Photo 9)
- (5) Pull out the outdoor heat exchanger temperature thermistor from its holder.
- (6) Pull out the ambient temperature thermistor from its holder.

### 5. Removing the outdoor fan motor

- (1) Remove the cabinet and the panels. (Refer to section 1.)
- (2) Disconnect the following connectors:  
<Inverter P.C. board>  
CN931, CN932 (Fan motor)
- (3) Remove the fan motor lead wire from where it is fastened on the separator.
- (4) Remove the propeller fan nut.
- (5) Remove the propeller fan.
- (6) Remove the screws fixing the fan motor.
- (7) Remove the fan motor.

## PHOTOS

Photo 6

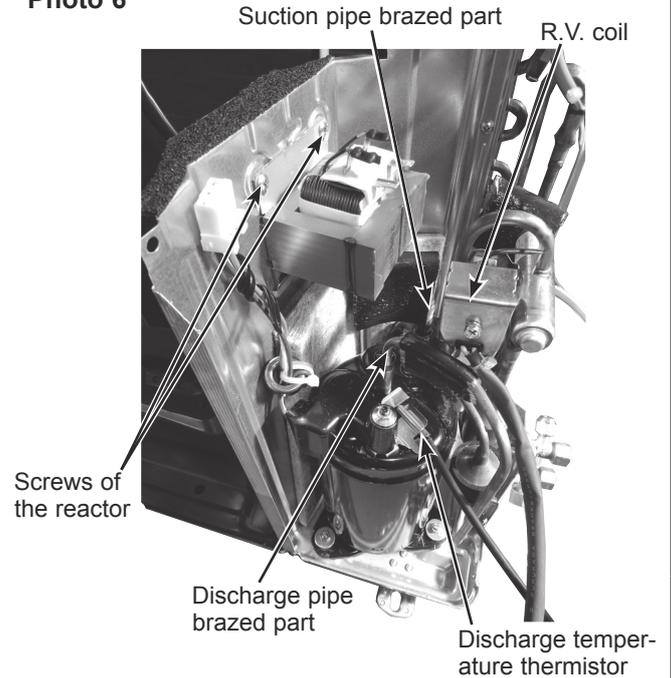


Photo 7

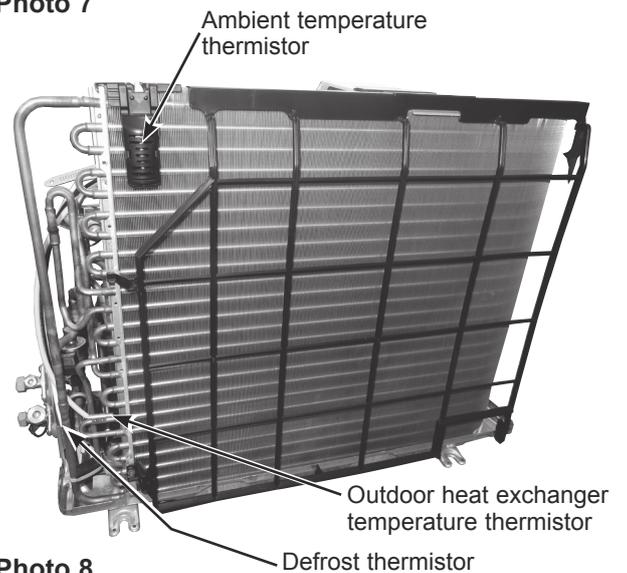
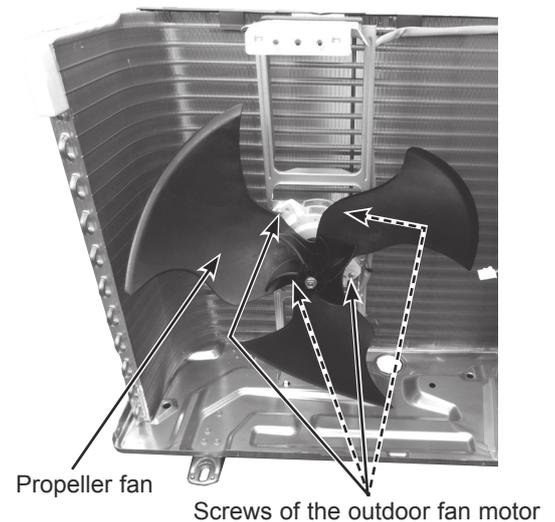


Photo 8



## OPERATING PROCEDURE

### 6. Removing the compressor and the 4-way valve

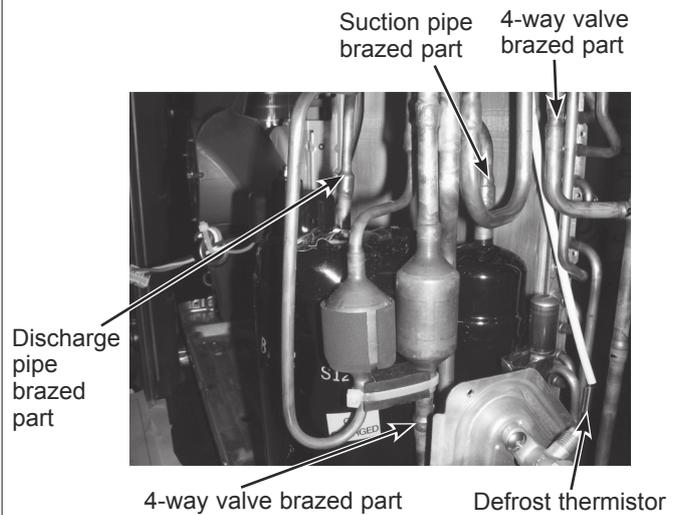
- (1) Remove the cabinet and the panels. (Refer to section 1.)
- (2) Remove the inverter assembly. (Refer to section 2.)
- (3) Remove the screws of the reactor and remove the reactor.
- (4) Remove the screws of the separator and remove the separator.
- (5) Remove the soundproof felt.
- (6) Remove the terminal cover and the compressor lead wire.
- (7) Recover gas from the refrigerant circuit.

**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).

- (8) Detach the brazed part of the suction and the discharge pipe connected with the compressor.
- (9) Detach the brazed part of pipes connected with the 4-way valve.
- (10) Remove the nuts of compressor legs.
- (11) Remove the compressor.

## PHOTOS

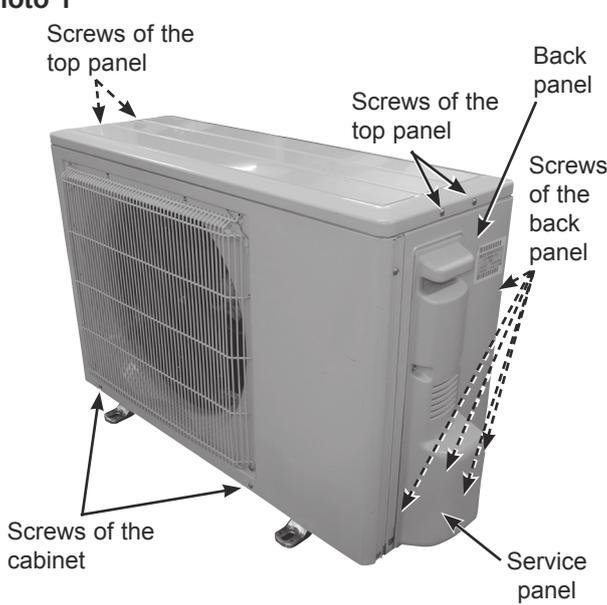
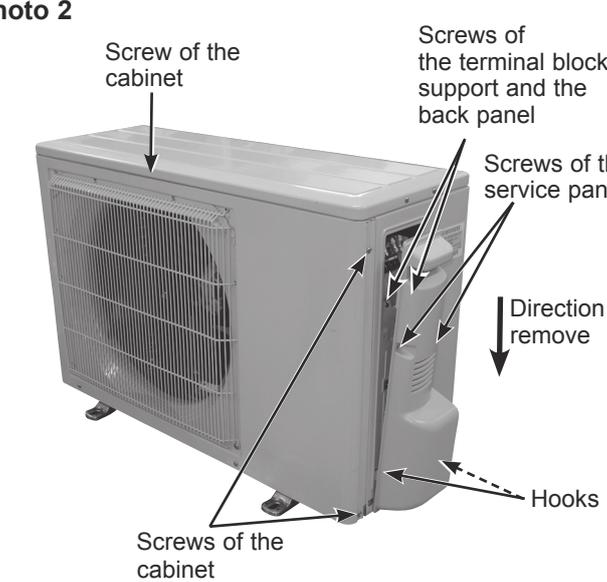
Photo 9



## 13-2. MUZ-HR42VF MUZ-HR50VF

**NOTE:** Turn OFF the power supply before disassembly.

Photos: **MUZ-HR42VF**

OPERATING PROCEDURE	PHOTOS
<p><b>1. Removing the cabinet</b></p> <ol style="list-style-type: none"><li>(1) Remove the screw fixing the service panel.</li><li>(2) Pull down the service panel and remove it.</li><li>(3) Disconnect the power supply cord and indoor/outdoor connecting wire.</li><li>(4) Remove the screws fixing the top panel.</li><li>(5) Remove the top panel.</li><li>(6) Remove the screws fixing the cabinet.</li><li>(7) Remove the cabinet.</li><li>(8) Remove the screws fixing the back panel.</li><li>(9) Remove the back panel.</li></ol>	<p><b>Photo 1</b></p>  <p><b>Photo 2</b></p> 

## OPERATING PROCEDURE

### 2. Removing the inverter assembly, inverter P.C. board

- (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>  
CN721 (R.V. coil)  
CN931, CN932 (Fan motor)  
CN641 (Defrost thermistor and discharge temperature thermistor)  
CN643 (Ambient temperature thermistor)  
CN644 (Outdoor heat exchanger temperature thermistor)  
CN724 (LEV)
- (3) Remove the compressor connector (CN61).
- (4) Remove the screws fixing the heat sink support and the separator.
- (5) Remove the fixing screws of the terminal block support and the back panel.
- (6) Remove the inverter assembly.
- (7) Remove the screw of the earth wire and screw of the terminal block support.
- (8) Remove the heat sink support from the P.C. board support.
- (9) Remove the screw of the inverter P.C. board and remove the inverter P.C. board from the P.C. board support.

### 3. Removing R.V. coil

- (1) Remove the cabinet and panels. (Refer to section 1.)
- (2) Disconnect the following connectors:  
<Inverter P.C. board>  
CN721 (R.V. coil)
- (3) Remove the R.V. coil.

### 4. Removing the discharge temperature thermistor, defrost 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>  
CN641 (Defrost thermistor and discharge temperature thermistor)  
CN643 (Ambient temperature thermistor)  
CN644 (Outdoor heat exchanger temperature thermistor)
- (3) Pull out the discharge temperature thermistor from its holder.
- (4) Pull out the defrost thermistor from its holder. (Photo 6)
- (5) Pull out the outdoor heat exchanger temperature thermistor from its holder. (Photo 6)
- (6) Pull out the ambient temperature thermistor from its holder.

## PHOTOS

Photo 3

Screws of the heat sink support and the separator      Screws of the terminal block support and the back panel

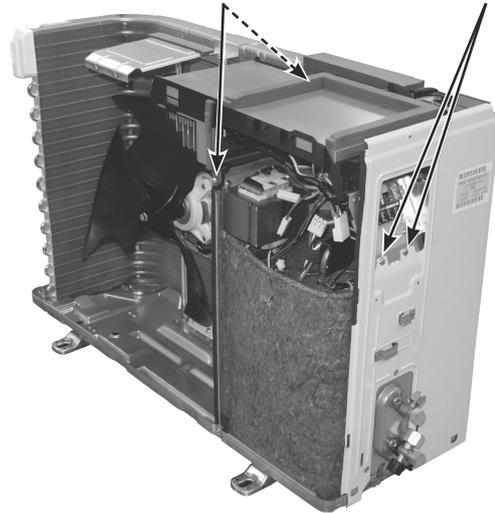


Photo 4 (Inverter assembly)

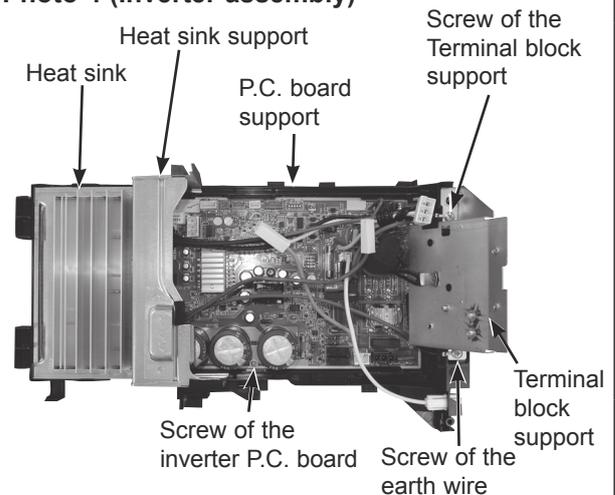


Photo 5

Screw of the R.V. coil



Discharge temperature thermistor

## OPERATING PROCEDURE

### 5. Removing outdoor fan motor

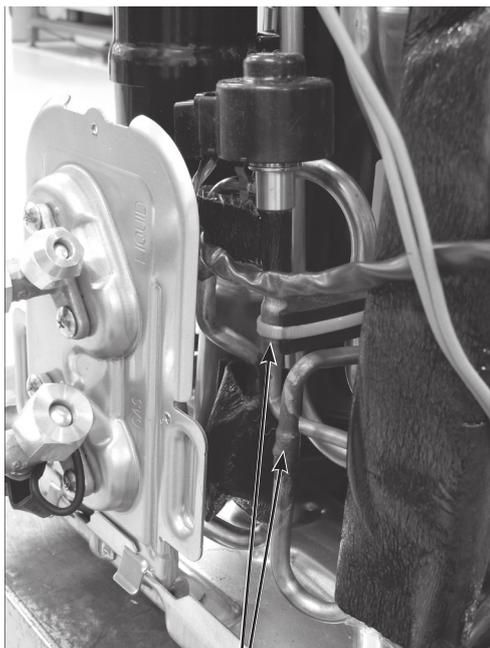
- (1) Remove the cabinet and panels. (Refer to section 1.)
- (2) Disconnect the following connectors:  
<Inverter P.C. board>  
CN931, CN932 (Fan motor)
- (3) Remove the propeller fan nut.
- (4) Remove the propeller fan.
- (5) Remove the screws fixing the fan motor.
- (6) Remove the fan motor.

### 6. 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) Recover gas from the refrigerant circuit.  
**NOTE:** Recover gas from the pipes until the pressure gauge shows 0 kg/cm<sup>2</sup> (0 MPa).
- (4) Detach the brazed part of the suction and the discharge pipe connected with compressor.
- (5) Remove the nuts of compressor legs.
- (6) Remove the compressor.
- (7) Detach the brazed part of pipes connected with 4-way valve.

### 7. Removing the LEV assembly

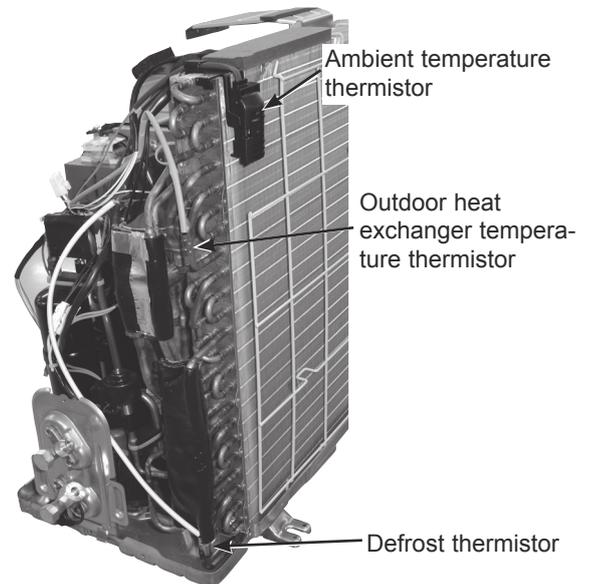
- (1) Detaching the brazed part of pipes connected with LEV valve.



Brazed parts of LEV valve

## PHOTOS

Photo 6



Ambient temperature thermistor

Outdoor heat exchanger temperature thermistor

Defrost thermistor

Photo 7

Screws of the outdoor fan motor



Propeller fan nut

Propeller fan

Photo 8



Brazed parts of 4-way valve

# **mitsubishi electric corporation**

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Made in Japan

Specifications are subject to change without notice.

## **SPLIT-TYPE AIR CONDITIONERS**

### **INDOOR UNIT**

**MSZ-HR25VF    MSZ-HR35VF    MSZ-HR42VF    MSZ-HR50VF**



**ERC**



**OPERATING INSTRUCTIONS**

**ИНСТРУКЦИИ ПО ЭКСПЛУАТАЦИИ**

**ІНСТРУКЦІЇ З ЕКСПЛУАТАЦІЇ**

**English**

**Русский**

**Українська**

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# SAFETY PRECAUTIONS

## Meanings of symbols displayed on indoor unit and/or outdoor unit

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

- Since rotating parts and parts which could cause an electric shock are used in this product, be sure to read these "Safety Precautions" before use.
- Since the cautionary items shown here are important for safety, be sure to observe them.
- After reading this manual, keep it together with the installation manual in a handy place for easy reference.

### Marks and their meanings

- WARNING :** Incorrect handling could cause serious hazard, such as death, serious injury, etc. with a high probability.
- CAUTION :** Incorrect handling could cause serious hazard depending on the conditions.

<b>WARNING</b>	
	<b>Do not connect the power cord to an intermediate point, use an extension cord, or connect multiple devices to a single AC outlet.</b> • This may cause overheating, fire, or electric shock.
	<b>Make sure the power plug is free of dirt and insert it securely into the outlet.</b> • A dirty plug may cause fire or electric shock.
	<b>Do not bundle, pull, damage, or modify the power cord, and do not apply heat or place heavy objects on it.</b> • This may cause fire or electric shock.
	<b>Do not turn the breaker OFF/ON or disconnect/connect the power plug during operation.</b> • This may create sparks, which can cause fire. • After the indoor unit is switched OFF with the remote controller, make sure to turn the breaker OFF or disconnect the power plug.

### Meanings of symbols used in this manual

- : Be sure not to do.
- : Be sure to follow the instruction.
- : Never insert your finger or stick, etc.
- : Never step onto the indoor/outdoor unit and do not put anything on them.
- : Danger of electric shock. Be careful.
- : Be sure to disconnect the power supply plug from the power outlet.
- : Be sure to shut off the power.
- : Risk of fire.

	<b>Do not expose your body directly to cool air for a prolonged length of time.</b> • This could be detrimental to your health.
	<b>The unit should not be installed, relocated, disassembled, altered, or repaired by the user.</b> • An improperly handled air conditioner may cause fire, electric shock, injury, or water leakage, etc. Consult your dealer. • If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent in order to avoid a hazard.
	<b>When installing, relocating, or servicing the unit, make sure that no substance other than the specified refrigerant (R32) enters the refrigerant circuit.</b> • Any presence of foreign substance such as air can cause abnormal pressure rise and may result in explosion or injury. • The use of any refrigerant other than that specified for the system will cause mechanical failure, system malfunction, or unit breakdown. In the worst case, this could lead to a serious impediment to securing product safety.

# SAFETY PRECAUTIONS

	<p>This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.</p> <p>Children should be supervised to ensure that they do not play with the appliance.</p>
	<p>Do not insert your finger, a stick, or other objects into the air inlet or outlet.</p> <ul style="list-style-type: none"> <li>This may cause injury, since the fan inside rotates at high speeds during operation.</li> </ul>
	<p>In case of an abnormal condition (such as a burning smell), stop the air conditioner and disconnect the power plug or turn the breaker OFF.</p> <ul style="list-style-type: none"> <li>A continued operation in the abnormal state may cause a malfunction, fire, or electric shock. In this case, consult your dealer.</li> </ul>
	<p>When the air conditioner does not cool or heat, there is a possibility of refrigerant leakage. If any refrigerant leakage is found, stop operations and ventilate the room well and consult your dealer immediately. If a repair involves recharging the unit with refrigerant, ask the service technician for details.</p> <ul style="list-style-type: none"> <li>The refrigerant used in the air conditioner is not harmful. Normally, it does not leak. However, if refrigerant leaks and comes in contact with fire or heating part of such a fan heater, kerosene heater, or cooking stove, it will create harmful gas and there is risk of fire.</li> </ul> <p>The user should never attempt to wash the inside of the indoor unit. Should the inside of the unit require cleaning, contact your dealer.</p> <ul style="list-style-type: none"> <li>Unsuitable detergent may cause damage to plastic material inside the unit, which may result in water leakage. Should detergent come in contact with electrical parts or the motor, it will result in a malfunction, smoke, or fire.</li> <li>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).</li> <li>Be aware that refrigerants may not contain an odour.</li> <li>Do not use means to accelerate the defrosting process or to clean the appliance, other than those recommended by the manufacturer.</li> <li>Do not pierce or burn.</li> </ul> <p>The indoor unit must be installed in rooms which exceed the floor space specified. Please consult your dealer.</p>
	<p>This appliance is intended to be used by expert or trained users in shops, in light industry and on farms, or for commercial use by lay persons.</p>
 <b>CAUTION</b>	
	<p>Do not touch the air inlet or the aluminum fins of the indoor/outdoor unit.</p> <ul style="list-style-type: none"> <li>This may cause injury.</li> </ul> <p>Do not use insecticides or flammable sprays on the unit.</p> <ul style="list-style-type: none"> <li>This may cause a fire or deformation of the unit.</li> </ul> <p>Do not expose pets or houseplants to direct airflow.</p> <ul style="list-style-type: none"> <li>This may cause injury to the pets or plants.</li> </ul> <p>Do not place other electric appliances or furniture under the indoor/outdoor unit.</p> <ul style="list-style-type: none"> <li>Water may drip down from the unit, which may cause damage or malfunction.</li> </ul> <p>Do not leave the unit on a damaged installation stand.</p> <ul style="list-style-type: none"> <li>The unit may fall and cause injury.</li> </ul> <p>Do not step on an unstable bench to operate or clean the unit.</p> <ul style="list-style-type: none"> <li>This may cause injury if you fall down.</li> </ul> <p>Do not pull the power cord.</p> <ul style="list-style-type: none"> <li>This may cause a portion of the core wire to break, which may cause overheating or fire.</li> </ul> <p>Do not charge or disassemble the batteries, and do not throw them into a fire.</p> <ul style="list-style-type: none"> <li>This may cause the batteries to leak, or cause a fire or explosion.</li> </ul> <p>Do not operate the unit for more than 4 hours at high humidity (80% RH or more) and/or with windows or outside door left open.</p> <ul style="list-style-type: none"> <li>This may cause the water condensation in the air conditioner, which may drip down, wetting or damaging the furniture.</li> <li>The water condensation in the air conditioner may contribute to growth of fungi, such as mold.</li> </ul> <p>Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects.</p> <ul style="list-style-type: none"> <li>This may cause deterioration of quality, or harm to animals and plants.</li> </ul> <p>Do not expose combustion appliances to direct airflow.</p> <ul style="list-style-type: none"> <li>This may cause incomplete combustion.</li> </ul> <p>Never put batteries in your mouth for any reason to avoid accidental ingestion.</p> <ul style="list-style-type: none"> <li>Battery ingestion may cause choking and/or poisoning.</li> </ul>

	<p>Before cleaning the unit, switch it OFF and disconnect the power plug or turn the breaker OFF.</p> <ul style="list-style-type: none"> <li>This may cause injury, since the fan inside rotates at high speeds during operation.</li> </ul> <p>When the unit will be unused for a long time, disconnect the power plug or turn the breaker OFF.</p> <ul style="list-style-type: none"> <li>The unit may accumulate dirt, which may cause overheating or fire.</li> </ul> <p>Replace all batteries of the remote controller with new ones of the same type.</p> <ul style="list-style-type: none"> <li>Using an old battery together with a new one may cause overheating, leakage, or explosion.</li> </ul> <p>If the battery fluid comes in contact with your skin or clothes, wash them thoroughly with clean water.</p> <ul style="list-style-type: none"> <li>If the battery fluid comes in contact with your eyes, wash them thoroughly with clean water and immediately seek medical attention.</li> </ul> <p>Ensure that the area is well-ventilated when the unit is operated together with a combustion appliance.</p> <ul style="list-style-type: none"> <li>Inadequate ventilation may cause oxygen starvation.</li> </ul> <p>Turn the breaker OFF when you hear thunder and there is a possibility of a lightning strike.</p> <ul style="list-style-type: none"> <li>The unit may be damaged if lightning strikes.</li> </ul> <p>After the air conditioner is used for several seasons, perform inspection and maintenance in addition to normal cleaning.</p> <ul style="list-style-type: none"> <li>Dirt or dust in the unit may create an unpleasant odor, contribute to growth of fungi, such as mold, or clog the drain passage, and cause water to leak from the indoor unit. Consult your dealer for inspection and maintenance, which require specialized knowledge and skills.</li> </ul>
	<p>Do not operate switches with wet hands.</p> <ul style="list-style-type: none"> <li>This may cause electric shock.</li> </ul> <p>Do not clean the air conditioner with water or place an object that contains water, such as a flower vase, on it.</p> <ul style="list-style-type: none"> <li>This may cause fire or electric shock.</li> </ul>
	<p>Do not step on or place any object on the outdoor unit.</p> <ul style="list-style-type: none"> <li>This may cause injury if you or the object falls down.</li> </ul>

 <b>IMPORTANT</b>	
<p>Dirty filters cause condensation in the air conditioner which will contribute to the growth of fungi such as mold. It is therefore recommended to clean air filters every 2 weeks.</p>	
<p>Before starting the operation, ensure that the horizontal vanes are in the closed position. If operation starts when the horizontal vanes are in the open position, they may not return to the correct position.</p>	

EN

# SAFETY PRECAUTIONS

## For installation

 <b>WARNING</b>	
	<p><b>Consult your dealer for installing the air conditioner.</b></p> <ul style="list-style-type: none"> <li>It should not be installed by the user since installation requires specialized knowledge and skills. An improperly installed air conditioner may cause water leakage, fire, or electric shock.</li> </ul>
	<p><b>Provide a dedicated power supply for the air conditioner.</b></p> <ul style="list-style-type: none"> <li>A non-dedicated power supply may cause overheating or fire.</li> </ul>
	<p><b>Do not install the unit where flammable gas could leak.</b></p> <ul style="list-style-type: none"> <li>If gas leaks and accumulates around the outdoor unit, it may cause an explosion.</li> </ul>
	<p><b>Earth the unit correctly.</b></p> <ul style="list-style-type: none"> <li>Do not connect the earth wire to a gas pipe, water pipe, lightning rod, or a telephone earth wire. Improper earthing may cause electric shock.</li> </ul>
 <b>CAUTION</b>	
	<p><b>Install an earth leakage breaker depending on the installation location of the air conditioner (such as highly humid areas).</b></p> <ul style="list-style-type: none"> <li>If an earth leakage breaker is not installed, it may cause electric shock.</li> </ul>
	<p><b>Ensure that the drain water is properly drained.</b></p> <ul style="list-style-type: none"> <li>If the drain passage is improper, water may drip down from the indoor/outdoor unit, wetting and damaging the furniture.</li> </ul>
<p><b>In case of an abnormal condition</b> Immediately stop operating the air conditioner and consult your dealer.</p>	

EN

# DISPOSAL



Fig. 1

To dispose of this product, consult your dealer.

**Note:** \_\_\_\_\_

This symbol mark is for EU countries only.  
This symbol mark is according to the directive 2012/19/ EU Article 14 Information for users and Annex IX, and/ or to the directive 2006/66/EC Article 20 Information for end-users and Annex II.

Your MITSUBISHI ELECTRIC product is designed and manufactured with high quality materials and components which can be recycled and/or reused.

This symbol means that electrical and electronic equipment, batteries and accumulators, at their end-of-life, should be disposed of separately from your household waste.

If a chemical symbol is printed beneath the symbol (Fig. 1), this chemical symbol means that the battery or accumulator contains a heavy metal at a certain concentration. This will be indicated as follows:

Hg: mercury (0.0005%), Cd: cadmium (0.002%), Pb: lead (0.004%)

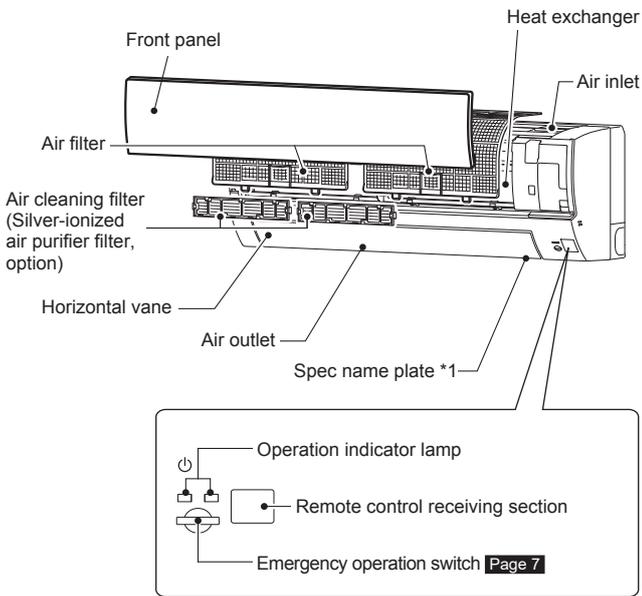
In the European Union there are separate collection systems for used electrical and electronic products, batteries and accumulators.

Please, dispose of this equipment, batteries and accumulators correctly at your local community waste collection/recycling centre.

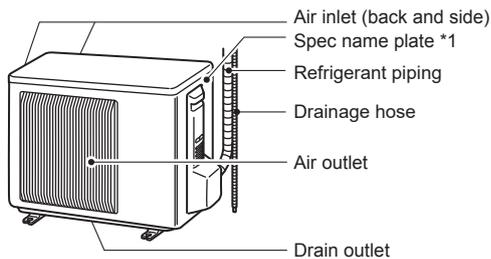
Please, help us to conserve the environment we live in!

# NAME OF EACH PART

## Indoor unit



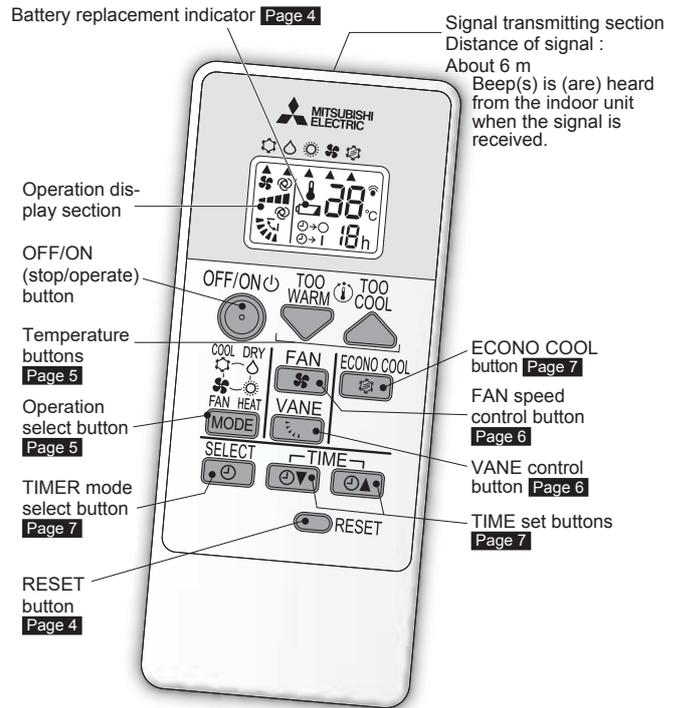
## Outdoor unit



Outdoor units may be different in appearance.

\*1 The manufacturing year and month are indicated on the spec name plate.

## Remote controller



Only use the remote controller provided with the unit.

Do not use other remote controllers. If two or more indoor units are installed in proximity to one another, an indoor unit that is not intended to be operated may respond to the remote controller.

### Remote controller

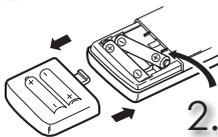
When the remote controller is not used, place it near this unit.

# PREPARATION BEFORE OPERATION

**Before operation:** Insert the power supply plug into the power outlet and/or turn the breaker on.

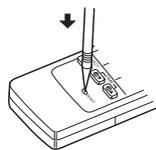
## Installing the remote controller batteries

1. Remove the back lid.



2. Insert the negative pole of AAA alkaline batteries first.

4. Press RESET.

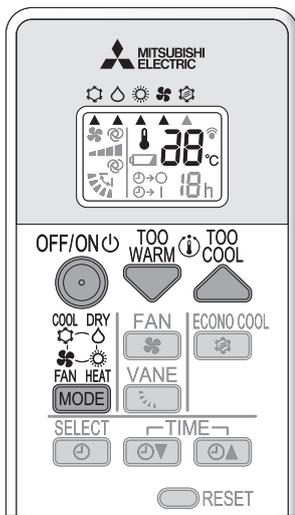


3. Install the back lid.

### Note:

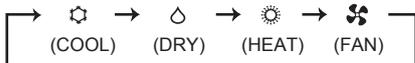
- Make sure the polarity of the batteries is correct.
- Do not use manganese batteries and leaking batteries. The remote controller could malfunction.
- Do not use rechargeable batteries.
- The battery replacement indicator lights up when the battery is running low. In about 7 days after the indicator starts lights up, the remote controller stops working.
- Replace all batteries with new ones of the same type.
- Batteries can be used for approximately 1 year. However, batteries with expired shelf lives last shorter.
- Press RESET gently using a thin instrument. If the RESET button is not pressed, the remote controller may not operate correctly.

# SELECTING OPERATION MODES



**1** Press to start the operation.

**2** Press to select operation mode. Each press changes mode in the following order:



**3** Press or to set the temperature. Each press raises or lowers the temperature by 1°C.

Press to stop the operation.

## COOL mode

Enjoy cool air at your desired temperature.

**Note:**

Do not operate COOL mode at very low outside temperatures (less than -10°C). Water condensed in the unit may drip and wet or damage furniture, etc.

## DRY mode

Dehumidify your room. The room may be cooled slightly. Temperature cannot be set during DRY mode.

## HEAT mode

Enjoy warm air at your desired temperature.

## FAN mode

Circulate the air in your room.

**Note:**

After COOL/DRY mode operation, it is recommended to operate in the FAN mode to dry inside the indoor unit.

**Note:**

### Multi system operation

Two or more indoor units can be operated by one outdoor unit. When several indoor units are operated simultaneously, cooling/dry/fan and heating operations cannot be done at the same time. When COOL/DRY/FAN is selected with one unit and HEAT with another or vice versa, the unit selected last goes into standby mode.

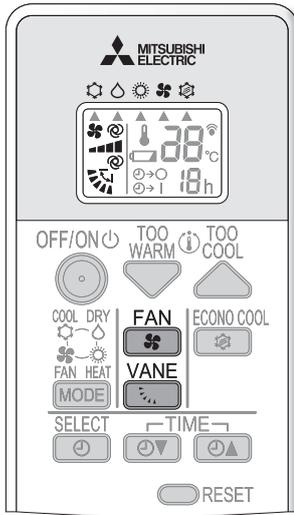
### Operation indicator lamp

The operation indicator lamp shows the operation state of the unit.

Indication	Operation state	Room temperature
	The unit is operating to reach the set temperature	About 2°C or more away from set temperature
	The room temperature is approaching the set temperature	About 1 to 2°C from set temperature
	Standby mode (only during multi system operation)	—

Lit   Blinking   Not lit

# FAN SPEED AND AIRFLOW DIRECTION ADJUSTMENT



## Fan speed

Press  to select fan speed. Each press changes fan speed in the following order:



- Two short beeps are heard from the indoor unit when set to AUTO.
- Use higher fan speed to cool/heat the room quicker. It is recommended to lower the fan speed once the room is cool/warm.
- Use lower fan speed for quiet operation.

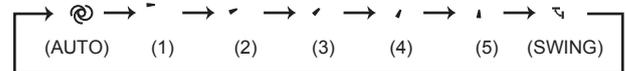
### Note:

#### Multi system operation

When several indoor units are operated simultaneously by one outdoor unit for heating operation, the temperature of the airflow may be low. In this case, it is recommended to set the fan speed to AUTO.

## Up-down Airflow direction

Press  to select airflow direction. Each press changes airflow direction in the following order:

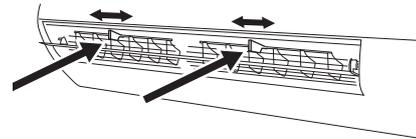


- ⊙ (AUTO).....The vane is set to the most efficient airflow direction. COOL/ DRY/FAN: horizontal position. HEAT: position (4).
- ☼ (Manual).....For efficient air conditioning, select the upper position for COOL/DRY, and the lower position for HEAT. If the lower position is selected during COOL/DRY, the vane automatically moves to the upward position after 0.5 to 1 hour to prevent any condensation from dripping.
- ↕ (Swing).....The vane moves up and down intermittently.
  - Two short beeps are heard from the indoor unit when set to AUTO.

## Left-right Airflow direction

### ■ To change the horizontal airflow direction.

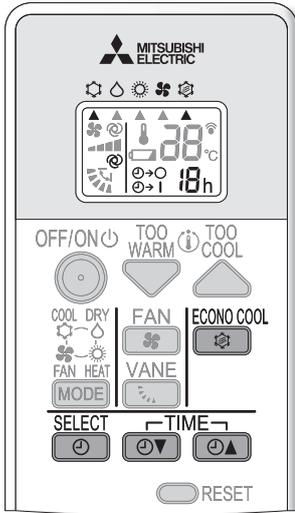
Move the vertical vane manually before starting operation.



### Note:

If the vertical vanes are adjusted while the unit is not operating, be sure to return the horizontal vanes to the original closed position.

# ECONO COOL OPERATION



Swing airflow (change of airflow) makes you feel cooler than stationary airflow.  
The set temperature and the airflow direction are automatically changed by the microprocessor. It is possible to perform cooling operation with keeping comfort. As a result energy can be saved.

## ECONO COOL

Press during COOL mode **page 5** to start ECONO COOL operation.

The unit performs swing operation vertically in various cycle according to the temperature of the unit. Set temperature is set 2°C higher automatically.

## ECONO COOL

Press again to cancel ECONO COOL operation.

- Pressing also cancels ECONO COOL operation.

# TIMER OPERATION (ON/OFF TIMER)

1

## SELECT

Press during operation to set the timer.  
Each press changes timer mode in the following order:



2

## TIME

Press to set the time of timer.  
Each press increases or decreases the set time by 1 hour.

## SELECT

Press until "TIMER RELEASE" is selected to release timer.

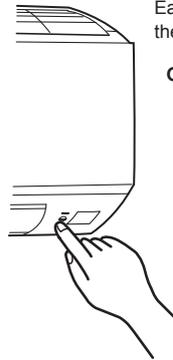
## Note:

- ON and OFF timers can not be used in combination.
- If power failure occurs while ON/OFF timer is set, see **page 7** "Auto restart function".

# EMERGENCY OPERATION

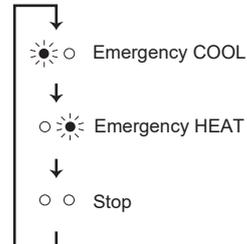
## When the remote controller cannot be used...

Emergency operation can be activated by pressing the emergency operation switch (E.O. SW) on the indoor unit.



Each time the E.O. SW is pressed, the operation changes in the following order:

## Operation indicator lamp



Set temperature : 24°C  
Fan speed : Medium  
Horizontal vane : Auto

## Note:

- The first 30 minutes of operation is test run. Temperature control does not work, and fan speed is set to High.
- In the emergency heating operation, the fan speed gradually rises to blow out warm air.

# AUTO RESTART FUNCTION

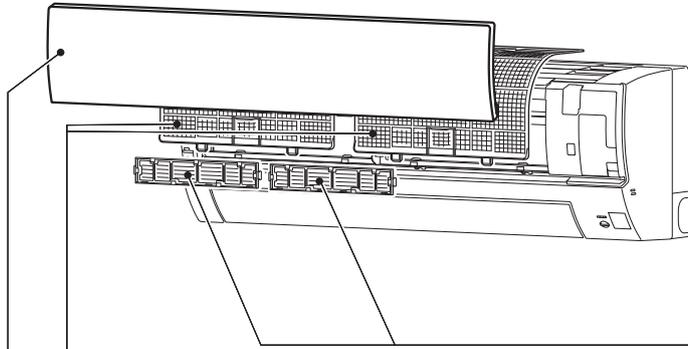
If a power failure occurs or the main power is turned off during operation, "Auto restart function" automatically starts operation in the same mode as the one set with the remote controller just before the shutoff of the main power. When timer is set, timer setting is cancelled and the unit starts operation when power is resumed.

**If you do not want to use this function, please consult the service representative because the setting of the unit needs to be changed.**

# CLEANING

## Instructions:

- Switch off the power supply or turn off the breaker before cleaning.
- Be careful not to touch the metal parts with your hands.
- Do not use benzine, thinner, polishing powder, or insecticide.
- Use only diluted mild detergents.
- Do not use a scrubbing brush, a hard sponge, or the like.
- Do not soak or rinse the horizontal vane.
- Do not use water hotter than 50°C.
- Do not expose parts to direct sunlight, heat, or fire to dry.
- Do not apply excessive force on the fan as it may cause cracks or breakage.

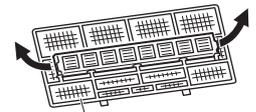


### Air filter (Air purifying filter)

- **Clean every 2 weeks**
- Remove dirt by a vacuum cleaner, or rinse with water.
- After washing with water, dry it well in shade.

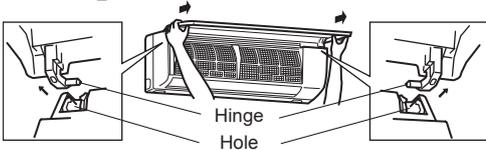
### Air cleaning filter (Silver-ionized air purifier filter, option)

- Every 3 months:**
- Remove dirt by a vacuum cleaner.
- When dirt cannot be removed by vacuum cleaning:**
- Soak the filter and its frame in lukewarm water before rinsing it.
  - After washing, dry it well in shade. Install all tabs of the air filter.
- Every year:**
- Replace it with a new air cleaning filter for best performance.
  - Parts Number **MAC-2370FT-E**



Pull to remove from the air filter

### Front panel



1. Lift the front panel until a "click" is heard.
2. Hold the hinges and pull to remove as shown in the illustration above.
  - Wipe with a soft dry cloth or rinse it with water.
  - Do not soak it in water for more than two hours.
  - Dry it well in shade before installing it.
3. Install the front panel by following the removal procedure in reverse. Close the front panel securely and press the positions indicated by the arrows.



### ! Important

- **Clean the filters regularly for best performance and to reduce power consumption.**
- **Dirty filters cause condensation in the air conditioner which will contribute to the growth of fungi such as mold. It is therefore recommended to clean air filters every 2 weeks.**

This information is based on **REGULATION (EU) No 528/2012**

MODEL NAME	Treated Article (Parts name)	Active Substances (CAS No.)	Property	Instruction for Use (Safe handling information)
MSZ-HR25/35/42/50VF	FILTER	TBZ (148-79-8)	Antimold	<ul style="list-style-type: none"> <li>• Use this product in line with the instruction manual indications and for the intended purpose only.</li> <li>• Do not put into mouth. Keep away from children.</li> </ul>
MAC-2370FT-E	FILTER	Silver zinc zeolite (130328-20-0)	Antibacterial	<ul style="list-style-type: none"> <li>• Use this product in line with the instruction manual indications and for the intended purpose only.</li> <li>• Do not put into mouth. Keep away from children.</li> </ul>

# WHEN YOU THINK THAT TROUBLE HAS OCCURRED

Even if these items are checked, when the unit does not recover from the trouble, stop using the air conditioner and consult your dealer.

Symptom	Explanation & Check points
<b>Indoor Unit</b>	
The unit cannot be operated.	<ul style="list-style-type: none"> <li>Is the breaker turned on?</li> <li>Is the power supply plug connected?</li> <li>Is the ON timer set? <a href="#">Page 7</a></li> </ul>
The horizontal vane does not move.	<ul style="list-style-type: none"> <li>Are the horizontal vane and the vertical vane installed correctly?</li> <li>Is the fan guard deformed?</li> </ul>
The unit cannot be operated for about 3 minutes when restarted.	<ul style="list-style-type: none"> <li>This protects the unit according to instructions from the microprocessor. Please wait.</li> </ul>
Mist is discharged from the air outlet of the indoor unit.	<ul style="list-style-type: none"> <li>The cool air from the unit rapidly cools moisture in the air inside the room, and it turns into mist.</li> </ul>
The swing operation of the HORIZONTAL VANE is suspended for a while, then restarted.	<ul style="list-style-type: none"> <li>This is for the swing operation of the HORIZONTAL VANE to be performed normally.</li> </ul>
The airflow direction changes during operation. The direction of the horizontal vane cannot be adjusted with the remote controller.	<ul style="list-style-type: none"> <li>When the unit is operated in COOL or DRY mode, if the operation continues with air blowing down for 0.5 to 1 hour, the direction of the airflow is automatically set to upward position to prevent water from condensing and dripping.</li> <li>In the heating operation, if the airflow temperature is too low or when defrosting is being done, the horizontal vane is automatically set to horizontal position.</li> </ul>
The operation stops for about 10 minutes in the heating operation.	<ul style="list-style-type: none"> <li>Outdoor unit is in defrost. Since this is completed in max. 10 minutes, please wait. (When the outside temperature is too low and humidity is too high, frost is formed.)</li> </ul>
The unit starts operation by itself when the main power is turned on, but hasn't received sign from the remote controller.	<ul style="list-style-type: none"> <li>These models are equipped with an auto restart function. When the main power is turned off without stopping the unit with the remote controller and is turned on again, the unit starts operation automatically in the same mode as the one set with the remote controller just before the shutoff of the main power. Refer to "Auto restart function". <a href="#">Page 7</a></li> </ul>
In COOL/DRY mode, when the room temperature reaches near the set temperature, the outdoor unit stops, then the indoor unit operates at low speed.	<ul style="list-style-type: none"> <li>When the room temperature deviates from the set temperature, the indoor fan starts running according to the settings on the remote controller.</li> </ul>
The indoor unit discolors over time.	<ul style="list-style-type: none"> <li>Although plastic turns yellow due to the influence of some factors such as ultraviolet light and temperature, this has no effect on the product functions.</li> </ul>
<b>Multi system</b>	
The indoor unit which is not operating becomes warm and a sound, similar to water flowing, is heard from the unit.	<ul style="list-style-type: none"> <li>A small amount of refrigerant continues to flow into the indoor unit even though it is not operating.</li> </ul>
When heating operation is selected, operation does not start right away.	<ul style="list-style-type: none"> <li>When operation is started during defrosting of outdoor unit is done, it takes a few minutes (max. 10 minutes) to blow out warm air.</li> </ul>
<b>Outdoor Unit</b>	
The fan of the outdoor unit does not rotate even though the compressor is running. Even if the fan starts to rotate, it stops soon.	<ul style="list-style-type: none"> <li>When the outside temperature is low during cooling operation, the fan operates intermittently to maintain sufficient cooling capacity.</li> </ul>
Water leaks from the outdoor unit.	<ul style="list-style-type: none"> <li>During COOL and DRY operations, pipe or pipe connecting sections are cooled and this causes water to condense.</li> <li>In the heating operation, water condensed on the heat exchanger drips down.</li> <li>In the heating operation, the defrosting operation makes ice forming on the outdoor unit melt and drip down.</li> </ul>
White smoke is discharged from the outdoor unit.	<ul style="list-style-type: none"> <li>In the heating operation, vapor generated by the defrosting operation looks like white smoke.</li> </ul>
<b>Remote controller</b>	
The display on the remote controller does not appear or it is dim. The indoor unit does not respond to the remote control signal.	<ul style="list-style-type: none"> <li>Are the batteries exhausted? <a href="#">Page 4</a></li> <li>Is the polarity (+, -) of the batteries correct? <a href="#">Page 4</a></li> <li>Are any buttons on the remote controller of other electric appliances being pressed?</li> </ul>

Symptom	Explanation & Check points
<b>Does not cool or heat</b>	
The room cannot be cooled or heated sufficiently.	<ul style="list-style-type: none"> <li>Is the temperature setting appropriate? <a href="#">Page 5</a></li> <li>Is the fan setting appropriate? Please change fan speed to High or Super High. <a href="#">Page 6</a></li> <li>Are the filters clean? <a href="#">Page 8</a></li> <li>Is the fan or heat exchanger of the indoor unit clean? <a href="#">Page 8</a></li> <li>Are there any obstacles blocking the air inlet or outlet of the indoor or outdoor unit?</li> <li>Is a window or door open?</li> <li>It may take a certain time to reach the setting temperature or may not reach that depending on the size of the room, the ambient temperature, and the like.</li> </ul>
The room cannot be cooled sufficiently.	<ul style="list-style-type: none"> <li>When a ventilation fan or a gas cooker is used in a room, the cooling load increases, resulting in an insufficient cooling effect.</li> <li>When the outside temperature is high, the cooling effect may not be sufficient.</li> </ul>
The room cannot be heated sufficiently.	<ul style="list-style-type: none"> <li>When the outside temperature is low, the heating effect may not be sufficient.</li> </ul>
Air does not blow out soon in the heating operation.	<ul style="list-style-type: none"> <li>Please wait as the unit is preparing to blow out warm air.</li> </ul>
<b>Airflow</b>	
The air from the indoor unit smells strange.	<ul style="list-style-type: none"> <li>Are the filters clean? <a href="#">Page 8</a></li> <li>Is the fan or heat exchanger of the indoor unit clean? <a href="#">Page 8</a></li> <li>The unit may suck in an odor adhering to the wall, carpet, furniture, cloth, etc. and blow it out with the air.</li> </ul>
<b>Sound</b>	
Cracking sound is heard.	<ul style="list-style-type: none"> <li>This sound is generated by the expansion/contraction of the front panel, etc. due to change in temperature.</li> </ul>
"Bubbling" sound is heard.	<ul style="list-style-type: none"> <li>This sound is heard when the outside air is absorbed from the drain hose by turning on the range hood or the ventilation fan, making water flowing in the drain hose to spout out. This sound is also heard when the outside air blows into the drain hose in case the outside wind is strong.</li> </ul>
Mechanical sound is heard from the indoor unit.	<ul style="list-style-type: none"> <li>This is the switching sound in turning on/off the fan or the compressor.</li> </ul>
The sound of water flowing is heard.	<ul style="list-style-type: none"> <li>This is the sound of refrigerant or condensed water flowing in the unit.</li> </ul>
Hissing sound is sometimes heard.	<ul style="list-style-type: none"> <li>This is the sound when the flow of refrigerant inside the unit is changed.</li> </ul>

In the following cases, stop using the air conditioner and consult your dealer.

- When water leaks or drips from the indoor unit.
- When the operation indicator lamp blinks.
- When the breaker trips frequently.
- The remote control signal is not received in a room where an electronic ON/OFF type fluorescent lamp (inverter-type fluorescent lamp, etc.) is used.
- Operation of the air conditioner interferes with radio or TV reception. An amplifier may be required for the affected device.
- When an abnormal sound is heard.
- When any refrigerant leakage is found.

## WHEN THE AIR CONDITIONER IS NOT GOING TO BE USED FOR A LONG TIME

- 1 Operate by COOL mode with the highest temperature set or FAN mode for 3 to 4 hours. **Page 5**
  - This dries the inside of the unit.
  - Moisture in the air conditioner contributes to favorable conditions for growth of fungi, such as mold.
- 2 Press  to stop the operation.
- 3 Turn off the breaker and/or disconnect the power supply plug.
- 4 Remove all batteries from the remote controller.

## When using the air conditioner again:

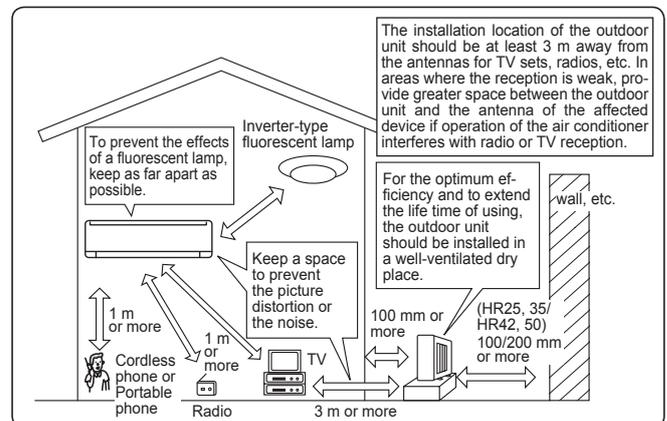
- 1 Clean the air filter. **Page 8**
- 2 Check that the air inlet and outlet of the indoor and outdoor units are not blocked.
- 3 Check that the earth is connected correctly.
- 4 Refer to the "PREPARATION BEFORE OPERATION", and follow the instructions. **Page 4**

## INSTALLATION PLACE AND ELECTRICAL WORK

### Installation place

Avoid installing the air conditioner in the following places.

- Where there is much machine oil.
- Salty places such as the seaside.
- Where sulfide gas is generated such as hot spring, sewage, waste water.
- Where oil is splashed or where the area is filled with oily smoke (such as cooking areas and factories, in which the properties of plastic could be changed and damaged).
- Where there is high-frequency or wireless equipment.
- Where the air from the outdoor unit air outlet is blocked.
- Where the operation sound or air from the outdoor unit bothers the house next door.
- The mounting height of indoor unit 1.8 m to 2.3 m is recommended. If it is impossible, please consult your dealer.
- Do not operate the air conditioner during interior construction and finishing work, or while waxing the floor. Before operating the air conditioner, ventilate the room well after such work is performed. Otherwise, it may cause volatile elements to adhere inside the air conditioner, resulting in water leakage or scattering of dew.
- This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.
- The indoor unit must be installed in rooms which exceed the floor space specified. Please consult your dealer.



### Electrical work

- Provide an exclusive circuit for the power supply of the air conditioner.
- Be sure to observe the breaker capacity.

If you have any questions, consult your dealer.

# SPECIFICATIONS

Model	Indoor		MSZ-HR25VF		MSZ-HR35VF		MSZ-HR42VF		MSZ-HR50VF		
	Outdoor		MUZ-HR25VF		MUZ-HR35VF		MUZ-HR42VF		MUZ-HR50VF		
Function			Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Power supply			~ /N, 230 V, 50 Hz								
Capacity		kW	2.5	3.15	3.4	3.6	4.2	4.7	5.0	5.4	
Input		kW	0.80	0.85	1.21	0.975	1.34	1.30	2.05	1.55	
Weight	Indoor	kg	8.5				9				
	Outdoor	kg	23		24		34		35		
Refrigerant filling capacity (R32)		kg	0.40		0.45		0.70		0.80		
IP code	Indoor		IP 20								
	Outdoor		IP 24								
Permissible excessive operating pressure	LP ps	MPa	2.77								
	HP ps	MPa	4.17								
Noise level (SPL)	Indoor (Super High/High/Med./Low)		dB(A)	43/37/30/21	43/37/30/21	46/38/31/22	44/37/30/21	44/39/34/24	46/40/32/24	45/40/36/28	47/41/34/27
	Outdoor		dB(A)	50	50	51	51	50	51	50	51

## Guaranteed operating range

		Indoor	Outdoor
Cooling	Upper limit	32°C DB 23°C WB	46°C DB —
	Lower limit	21°C DB 15°C WB	-10°C DB —
Heating	Upper limit	27°C DB —	24°C DB 18°C WB
	Lower limit	20°C DB —	-10°C DB -11°C WB

DB: Dry Bulb  
WB: Wet Bulb

## Note:

Rating condition  
 Cooling — Indoor: 27°C DB, 19°C WB  
           Outdoor: 35°C DB  
 Heating — Indoor: 20°C DB  
           Outdoor: 7°C DB, 6°C WB



# **MITSUBISHI ELECTRIC CORPORATION**

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HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN  
ООО «Мицубиси Электрик (РУС)»: 115114, Российская Федерация, г. Москва, ул. Летниковская, д. 2, стр. 1, 5 этаж  
Контактный номер телефона: +7-495-721-20-70

# **ATTESTATIONS**

## **AQC**

# ATTESTATION D'ESSAIS DE FONCTIONNEMENT RÉSEAUX D'EAUX INTÉRIEURS AUX BÂTIMENTS

## DÉSIGNATION DE L'OUVRAGE

Désignation et adresse de l'opération :

Capitainerie de Palavas

Localisation des contrôles :

Bâtiment : RDC

Hall :

Zone :

## ENREGISTREMENT DES ESSAIS

RÉSEAUX / ÉQUIPEMENTS	LOCALISATION	Réf. des ESSAIS	ESSAI SATISFAISANT	OBSERVATIONS
Ballon ECS	Local ménage	...	<input checked="" type="checkbox"/>	
Vidoir	Local ménage	...	<input checked="" type="checkbox"/>	
WC PMR	WC	...	<input checked="" type="checkbox"/>	
Lave-mains	WC	...	<input checked="" type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
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PLOMBERIE

# ATTESTATION D'ESSAIS DE FONCTIONNEMENT RÉSEAUX D'EAUX INTÉRIEURS AUX BÂTIMENTS

A REMETTRE AU  
DEMANDEUR

PB2

## ENREGISTREMENT DES ESSAIS

RÉSEAUX / ÉQUIPEMENTS	LOCALISATION	Réf. des ESSAIS	ESSAI SATISFAISANT	OBSERVATIONS
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
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		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	

## ATTESTATION DE RÉALISATION DES ESSAIS

Monsieur, Madame : Anthony BOSCH

De la société : Camborde Energies 34

Responsable de l'exécution des essais et vérifications, mentionné ci-dessus, déclare que les renseignements portés sur le présent procès-verbal d'essais sont exacts et que les essais sont satisfaisants.

NB : le présent procès-verbal d'essais vise le bon fonctionnement des installations et ne constitue pas une attestation relative à la sécurité des personnes.

Date : le 11/07/2023

Signature :

**SARL CAMBORDE ENERGIES 34**

6 Grand Rue  
34725 ST GUIRAUD  
Tél : 06 38 84 76 88  
SIRET 799 893 631 00017

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# ATTESTATION D'ESSAIS DE FONCTIONNEMENT VENTILATION MÉCANIQUE CONTRÔLÉE SIMPLE FLUX

VENTILATION

## DÉSIGNATION DE L'OUVRAGE

Désignation et adresse de l'opération :

Capitaine de Palavas

Localisation des contrôles :

Bâtiment : RDC / R+1

Hall :

Zone :

## ENREGISTREMENT DES ESSAIS

ÉQUIPEMENTS	LOCALISATION	Réf. des ESSAIS	ESSAI SATISFAISANT	OBSERVATIONS
Caisson	RDC	...	<input checked="" type="checkbox"/>	50% libres
Variateur	RDC	...	<input checked="" type="checkbox"/>	
Bouches	RDC	...	<input checked="" type="checkbox"/>	
Caisson	R+1	...	<input checked="" type="checkbox"/>	25% libres
Bouches	R+1	...	<input checked="" type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
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		...	<input type="checkbox"/>	



# ATTESTATION D'ESSAIS DE FONCTIONNEMENT VENTILATION MÉCANIQUE CONTRÔLÉE SIMPLE FLUX

VMCI

À REMETTRE AU  
DEMANDEUR

VENTILATION

## ENREGISTREMENT DES ESSAIS

ÉQUIPEMENTS	LOCALISATION	Réf. des ESSAIS	ESSAI SATISFAISANT	OBSERVATIONS
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
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## ATTESTATION DE RÉALISATION DES ESSAIS

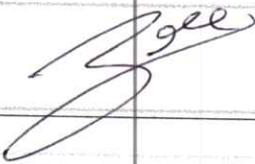
Monsieur, madame : Anthony BoscDe la société : Camborde Energies 34

Responsable de l'exécution des essais et vérifications, mentionné ci-dessus, déclare que les renseignements portés sur le présent procès-verbal d'essais sont exacts et que les essais sont satisfaisants.

NB : le présent procès-verbal d'essais vise le bon fonctionnement des installations et ne constitue pas une attestation relative à la sécurité des personnes.

Date : le 11/07/2023

Signature :



SARL CAMBORDE ENERGIES 34

6 Grand Rue

34725 ST GUIRAUD

Tél : 06 38 84 76 88

SIRET 799 893 631 00017

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## ENREGISTREMENT DES ESSAIS

ÉQUIPEMENTS	LOCALISATION	Réf. des ESSAIS	ESSAI SATISFAISANT	OBSERVATIONS
risplit GE	RDC	...	<input checked="" type="checkbox"/>	
cassette Accueil 1	RDC	...	<input checked="" type="checkbox"/>	
cassette Accueil 2	RDC	...	<input checked="" type="checkbox"/>	
cassette Bureau	RDC	...	<input checked="" type="checkbox"/>	
monosplit GE	RDC	...	<input checked="" type="checkbox"/>	
split baie info	RDC	...	<input checked="" type="checkbox"/>	
monosplit GE droit	R+1	...	<input checked="" type="checkbox"/>	
split droit	R+1	...	<input checked="" type="checkbox"/>	
monosplit GE gauche	R+1	...	<input checked="" type="checkbox"/>	
split gauche	R+1	...	<input checked="" type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	
		...	<input type="checkbox"/>	

# ATTESTATION D'ESSAIS DE FONCTIONNEMENT POMPES À CHALEUR AIR / AIR

"Installation de chauffage"

## ④ FICHE RÉCAPITULATIVE

### DÉSIGNATION DE L'OUVRAGE

Désignation et adresse de l'opération :

Capitaine de Palavas

Localisation des contrôles :

Bâtiment : RDC / R+1

Hall :

Zone :

RÉSEAUX		GÉNÉRATEURS DE CHALEUR		TERMINAUX	
Réseaux hydrauliques		Chaudière individuelle		Radiateur eau chaude	
Réseaux aérauliques		Chaudière collective		Plancher chauffant à eau chaude	
		Sous-station			
		Chaudière bois			
		PAC Air / Eau			
		PAC Air / Air	x 4		
	Nbre de PV		Nbre de PV		Nbre de PV

### ATTESTATION DE RÉALISATION DES ESSAIS

Monsieur, madame : Anthony BOSC

De la société : Camborde Energies 34

Responsable de l'exécution des essais et vérifications, mentionné ci-dessus, déclare que les renseignements portés sur le présent procès-verbal d'essais sont exacts et que les essais sont satisfaisants.

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Date : le 11/07/2023

Signature :



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