



SPLIT-TYPE, HEAT PUMP AIR CONDITIONERS

**2004**

# TECHNICAL & SERVICE MANUAL

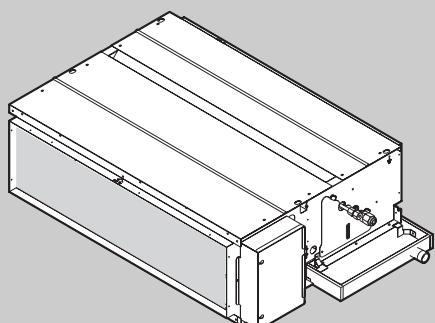
---

**Series PEAD Ceiling Concealed R407C/R410A**

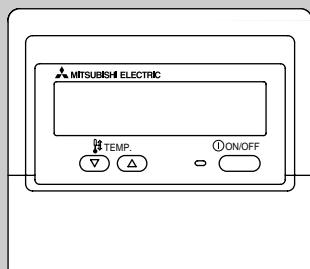
&lt;indoor unit&gt; Service ref.

Models **PEAD-RP1.6EA**  
**PEAD-RP2EA**  
**PEAD-RP2.5EA**  
**PEAD-RP3EA1**  
**PEAD-RP4EA1**  
**PEAD-RP5EA1**  
**PEAD-RP6EA1**

- Refer to the OCT04 as for control relation. This manual does not cover outdoor units.  
When servicing them, please refer to the service manual OC261 REVISED EDITION-B, OC294 REVISED EDITION-A and this manual as a set.



INDOOR UNIT



REMOTE CONTROLLER

## CONTENTS

1. COMBINATION OF INDOOR AND OUTDOOR UNITS .....	2
2. SAFETY PRECAUTION .....	3
3. PART NAMES AND FUNCTIONS .....	5
4. SPECIFICATION .....	8
5. DATA .....	15
6. REFRIGERANT SYSTEM DIAGRAM .....	38
7. OUTLINES & DIMENSIONS .....	39
8. WIRING DIAGRAM .....	41
9. TROUBLE SHOOTING .....	42
10. DISASSEMBLY INSTRUCTIONS .....	51
11. PARTS LIST .....	53
12. OPTIONAL PARTS .....	59

**Mr. SLIM™**

# COMBINATION OF INDOOR AND OUTDOOR UNITS

(R410A Inverter)

Indoor unit	Outdoor unit [OC294]						
	Heat pump type						
	PUHZ-RP						
	1.6VHA	2VHA	2.5VHA	3VHA	4VHA	5VHA	6VHA
PEAD-RP1.6EA	○	—	—	—	—	—	—
PEAD-RP2EA	—	○	—	—	—	—	—
PEAD-RP2.5EA	—	—	○	—	—	—	—
PEAD-RP3EA1	—	—	—	○	—	—	—
PEAD-RP4EA1	—	—	—	—	○	—	—
PEAD-RP5EA1	—	—	—	—	—	○	—
PEAD-RP6EA1	—	—	—	—	—	—	○

(R407C Fixed speed)

Indoor unit	Outdoor unit [OC261 REVISED EDITION-B]											
	Heat pump type						Cooling only type					
	PUH-P						PU-P					
	1.6		2		2.5		1.6		2		2.5	
	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK
PEAD-RP1.6EA	○	○	—	—	—	—	○	○	—	—	—	—
PEAD-RP2EA	—	—	○	○	—	—	—	—	○	○	—	—
PEAD-RP2.5EA	—	—	—	—	○	○	—	—	—	—	○	○

Indoor unit	Outdoor unit [OC261 REVISED EDITION-B]					
	Heat pump type					
	PUH-P					
	3		4		5	
	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	YGAA.UK YGAA1.UK	YGAA.UK YGAA1.UK
PEAD-RP3EA1	○	○	—	—	—	—
PEAD-RP4EA1	—	—	○	○	—	—
PEAD-RP5EA1	—	—	—	—	○	—
PEAD-RP6EA1	—	—	—	—	—	○

Indoor unit	Outdoor unit [OC261 REVISED EDITION-B]					
	Cooling only type					
	PU-P					
	3		4		5	
	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	VGAA.UK VGAA1.UK	YGAA.UK YGAA1.UK	YGAA.UK YGAA1.UK	YGAA.UK YGAA1.UK
PEAD-RP3EA1	○	○	—	—	—	—
PEAD-RP4EA1	—	—	○	○	—	—
PEAD-RP5EA1	—	—	—	—	○	—
PEAD-RP6EA1	—	—	—	—	—	○

## 2 SAFETY PRECAUTION

### CAUTIONS RELATED TO NEW REFRIGERANT

<Cautions for units utilizing refrigerant R410A>

#### Use new refrigerant pipes.

In case of using the existing pipes for R22, be careful with the following.

- For RP4 be sure to perform pipe replacement operation before test run.
- Use flare nut as provided with this product.  
Use a newly flared pipe.
- Avoid using thin pipes. For the detail, please refer to the outdoor unit service manual No. OC294.

**Make sure that the inside and outside of refrigerant piping is clean and it has no contamination such as sulfur which is hazardous for use, oxides, dirt, shaving particles, etc.**

**In addition, use pipes with specified thickness.**

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

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

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

**Use ester oil, ether oil or alkylbenzene oil (small amount) as the refrigerant oil applied to flares and flange connections.**

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

**Charge refrigerant from liquid phase of gas cylinder.**

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

#### Do not use refrigerant other than R410A.

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

#### Use a vacuum pump with a reverse flow check valve.

If no reverse flow check valve is used, 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 R410A refrigerant.

The following tools are necessary to use R410A refrigerant.

Tools (for R410A)	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adaptor
Torque wrench	Electronic refrigerant charging scale

#### Keep the tools with care.

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

#### Do not use a charging cylinder without syphon tube.

If a charging cylinder is used without syphon tube, the composition of refrigerant will change and the efficiency will be lowered.

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

### [1] Cautions for installing or relocation of unit

- (1) Perform service after collecting the refrigerant left in unit completely.
- (2) Do not release refrigerant in the air.
- (3) After completing service, charge the system with the specified amount of refrigerant.
- (4) When performing service, install a filter drier simultaneously.

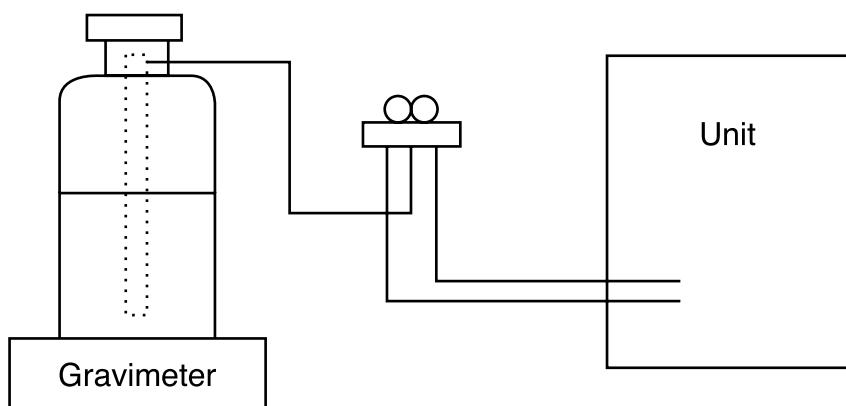
Be sure to use a filter drier for new refrigerant.

## [2] Additional refrigerant charge

### When charging directly from cylinder

Ensure that the cylinder for R410A is syphon type.

Charging should be performed with the syphon cylinder type stood vertically.  
(Refrigerant must be charged from liquid phase.)



## [3] Service tools

Use the below service tools as exclusive tools for R410A refrigerant.

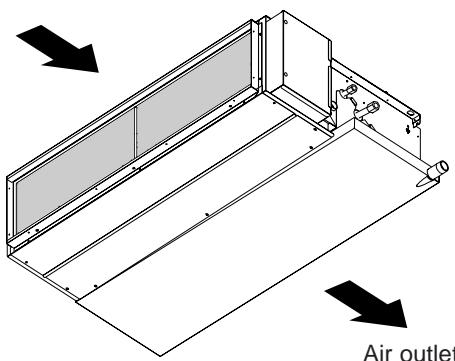
No.		Specifications
①	Gauge manifold	<ul style="list-style-type: none"><li>• Only for R410A</li><li>• Use the existing fitting specifications. (UNF1/2)</li><li>• Use high-tension side pressure of 5.3MPa·G or over.</li></ul>
②	Charge hose	<ul style="list-style-type: none"><li>• Only for R410A</li><li>• Use pressure performance of 5.09MPa·G or over.</li></ul>
③	Electronic scale	—
④	Gas leak detector	<ul style="list-style-type: none"><li>• Use the detector for R134a, R407C or R410A.</li></ul>
⑤	Adaptor for reverse flow check	<ul style="list-style-type: none"><li>• Attach on vacuum pump.</li></ul>
⑥	Refrigerant charge base	—
⑦	Refrigerant cylinder	<ul style="list-style-type: none"><li>• Only for R410A</li><li>Top of cylinder (Pink)</li><li>Cylinder with syphon</li></ul>
⑧	Refrigerant recovery equipment	—

### 3

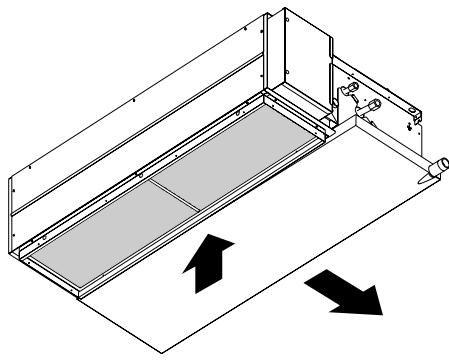
## PART NAMES AND FUNCTIONS

- Indoor Unit

Air intake (sucks the air inside the room into the unit)



In case of rear inlet

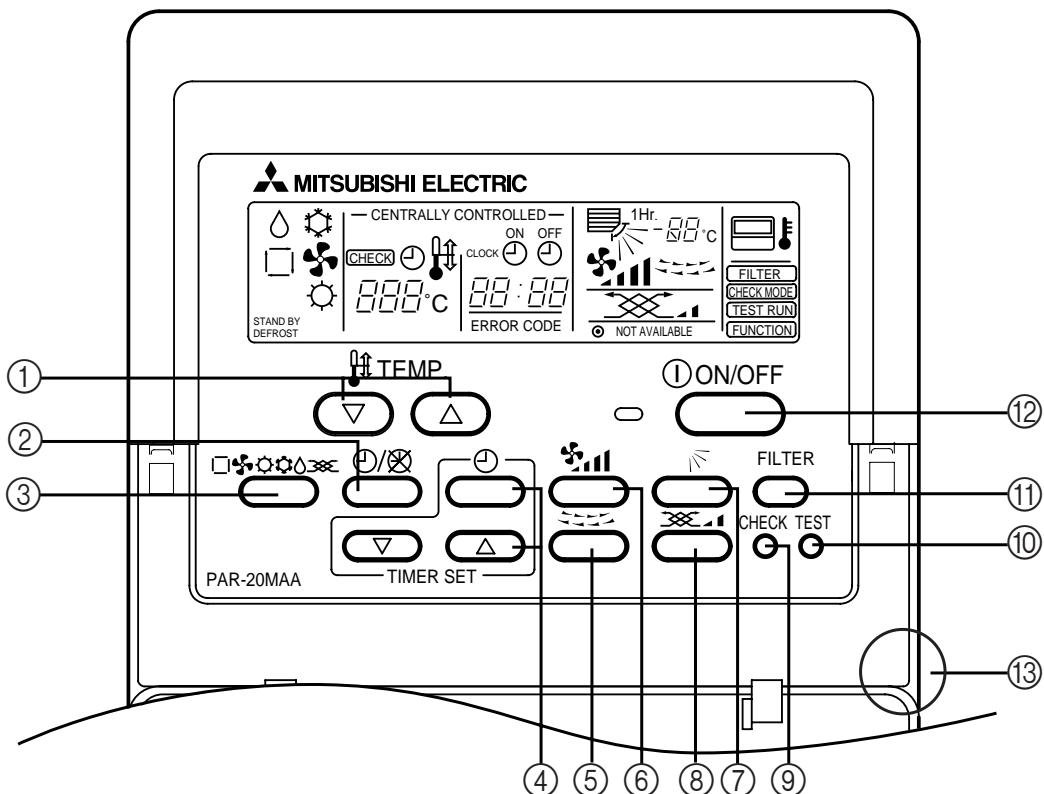


In case of bottom inlet  
(Only 1.6~2.5HP)

## • Remote controller

- Once the operation of the unit is set, subsequent operations can be performed only by pressing the ON/OFF button repeatedly.

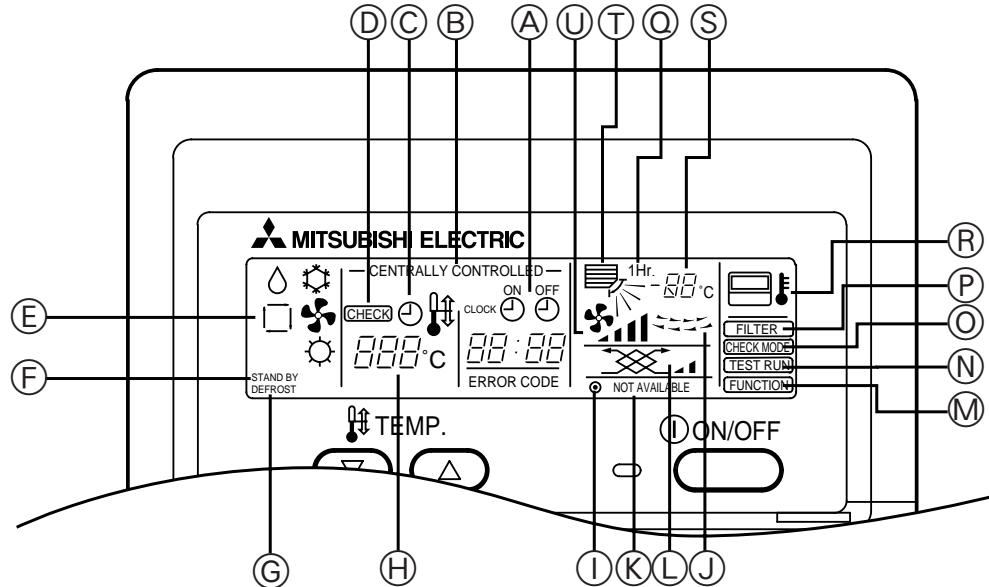
## [Operation buttons]



- ① [Room temperature adjustment] Button
- ② [Timer/continuous] Button
- ③ [Selecting operation] Button
- ④ [Time selection] Button
- ⑤ [Time-setting] Button
- ⑥ [Louver] Button (This button does not operate in this model)
- ⑦ [Fan speed adjustment] Button
- ⑧ [Up/down airflow direction] Button (This button does not operate in this model)
- ⑨ [Ventilation] Button
- ⑩ [Checking/built-in] Button
- ⑪ [Test run] Button
- ⑫ [ON/OFF] Button
- ⑬ Position of built-in room temperature sensor

- Never expose the remote controller to direct sunlight. Doing so can result in the erroneous measurement of room temperature.
- Never place any obstacle around the lower right-hand section of the remote controller. Doing so can result in the erroneous measurement of room temperature.

## [Display]



- (A) Current time/Timer
- (B) Centralized control
- (C) Timer ON
- (D) Abnormality occurs
- (E) Operation mode: ☀ COOL, ⚡ DRY, □ AUTO,  
▢ FAN, ☀ HEAT
- (F) Preparing for Heating mode
- (G) Defrost mode
- (H) Set temperature
- (I) Power ON
- (J) Louver

- (K) Not available function
- (L) Ventilation
- (M) Function setting mode
- (N) Test run mode
- (O) Error check mode
- (P) Filter sign
- (Q) Set effective for 1 hr.
- (R) Sensor position
- (S) Room temperature
- (T) Airflow
- (U) Fan speed

### Caution

- Power ON display lights up when unit is in standby mode.
- When power is turned ON for the first time the (CENTRAL CTRL) display appears to go off momentarily but this is not a malfunction.
- When the central control remote control unit, which is sold separately, is used the ON-OFF button, operation switch button and ⚡ TEMP. adjustment button do not operate.
- "NOT AVAILABLE" is displayed when the Airflow direction button or Louver button are pressed. This indicates that this room unit is not equipped with the fan direction adjustment function and the louver function.
- When power is turned ON for the first time, it is normal that "H0" is displayed on the room temperature indication (For max. 2minutes). Please wait until this "H0" indication disappears then start the operation.



Item		Service Ref.		PEAD-RP2EA				
Function				Cooling	Heating	Cooling	Heating	
Capacity      * 1		Btu/h	19,100	21,400	16,700	20,400		
		W	5,600	6,300	4,900	6,000		
Total input      * 1		kW	2.53	2.20	1.52	1.65		
INDOOR UNIT	Service Ref.		PEAD-RP2EA					
	Power supply		Single phase, 50Hz, 220-240V					
	Input      * 3	kW	0.14					
	Running current      * 3	A	0.61					
	Starting current      * 3	A	0.9					
	External finish		Galvanized sheets					
	Heat exchanger		Plate fin coil					
	Fan	Fan (drive) × No.	Centrifugal (direct) × 2					
	Fan motor output	kW	0.076					
	Airflow (Lo-Hi)	m³/min <CFM>	13.5-17<477-600>					
	External static pressure	Pa	30/70					
	Booster heater      * 3	kW	-					
	Operation control & Thermostat		Built in remote controller					
	Noise level (Lo-Hi)	dB (A)	30Pa	36-40				
			70Pa	38-44				
OUTDOOR UNIT	Unit drain pipe O.D		mm (in.)	R1 (External thread)				
	Dimensions	W	mm (in.)	935 (36-13/16)				
		D	mm (in.)	700 (27-5/8)				
		H	mm (in.)	295 (11-5/8)				
	Weight	kg (lbs)	35 (77)					
	Service Ref.			PU(H)-P2VGAA/PU(H)-P2YGAA PU(H)-P2VGAA <sub>1</sub> /PU(H)-P2YGAA <sub>1</sub>	PUHZ-RP2VHA			
	Power supply			Single phase, 50Hz, 220-240V / 3 phase , 50Hz, 380-415V (4 wires)			Single phase, 50Hz, 220-240V	
	Input	kW	2.29	2.36	1.39	1.46		
	Running current	A	10.26/3.70	10.57/3.82	6.16	6.47		
	Starting current	A	62/31		13			
	External finish		Munsell 5Y 7/1			Munsell 3Y 7.8/1.1		
	Refrigerant control		Linear Expansion Valve			Linear Expansion Valve		
	Compressor	Model	Hermetic			Hermetic		
	Motor output	kW	1.6			1.1		
	Starter type		Line start			Line start		
	Protection devices	Internal thermostat	Thermal relay			HP switch		
		HP switch	HP switch			Discharge thermo		
	Crankcase heater	W	38			-		
	Heat exchanger		Plate fin coil			Plate fin coil		
	Fan	Fan (drive) × No.	Propeller (direct) × 1			Propeller (direct) × 1		
		Fan motor output	kW	0.07		0.043		
		Airflow	m³/min (CFM)	55 (1,940)		35 (1,240)		
	Defrost method		Reverse cycle			Reverse cycle		
REFRIGERANT PIPING	Noise level	Cooling	dB (A)	48		44		
		Heating	dB (A)	49		46		
	Dimensions	W	mm (in.)	900 (35-7/16)		800 (31-1/2)		
		D	mm (in.)	330+20 (13+1-3/4)		300+23 (11-13/16+7/8)		
		H	mm (in.)	855 (33-5/8)		600 (23-5/8)		
	Weight	kg (lbs)	71 (157)			45 (99)		
	Refrigerant		R407C			R410A		
	Charge	kg (lbs)	2.6 (5.7)			2.5 (5.5)		
	Oil (Model)	L	1.2 (Ester) MEL56			0.45 (NEO22)		
	Pipe size O.D	Liquid	mm (in.)	9.52 (3/8)		6.35 (1/4)		
		Gas	mm (in.)	15.88 (5/8)		12.7 (1/2)		
	Connection method	Indoor side			Flared			
		Outdoor side			Flared			
	Between the indoor & outdoor unit	Height difference		Max. 40m		Max. 30m		
		Piping length		Max. 40m		Max. 50m		

Notes 1. Rating Conditions (ISO 13253 T1)

Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)

Heating: Indoor: D.B.20°C (68°F)

Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

	Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C
	Lower limit	D.B.19°C, W.B.15°C
Heating	Upper limit	D.B.28°C
	Lower limit	D.B.17°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

Item		Service Ref.		PEAD-RP2.5EA			
Function				Cooling	Heating	Cooling	Heating
Capacity	* 1	Btu/h		22,500	24,300	20,400	23,800
		W		6,600	7,150	6,000	7,000
Total input	* 1	kW		2.65	2.36	1.86	1.90
Service Ref.		PEAD-RP2.5EA					
Power supply		Single phase, 50Hz, 220-240V					
	Input	* 3	kW		0.16		
	Running current	* 3	A		0.70		
	Starting current	* 3	A		1.0		
External finish		Galvanized sheets					
Heat exchanger		Plate fin coil					
Fan	Fan (drive) × No.			Centrifugal (direct) × 2			
	Fan motor output		kW		0.116		
	Airflow (Lo-Hi)		m³/min <CFM>		17-21<600-741>		
	External static pressure		Pa		30/70		
Booster heater	* 3	kW			—		
Operation control & Thermostat		Built in remote controller					
Noise level (Lo-Hi)	dB (A)	30Pa		37-41			
		70Pa		39-46			
Unit drain pipe O.D		mm (in.)		R1 (External thread)			
Dimensions	W	mm (in.)		1,175 (46-1/8)			
	D	mm (in.)		700 (27-5/8)			
	H	mm (in.)		295 (11-5/8)			
Weight		kg (lbs)		42 (92)			
Service Ref.		PU(H)-P2.5VGAA/PU(H)-P2.5YGAA		PUHZ-RP2.5VHA			
Power supply		PU(H)-P2.5VGAA1/PU(H)-P2.5YGAA1		Single phase, 50Hz, 220-240V			
	Input	kW		2.77	2.68	1.49	1.69
	Running current	A		11.90/4.48	11.51/4.34	6.61	7.50
	Starting current	A		77/35		19	
External finish		Munsell 5Y 7/1		Munsell 3Y 7.8/1.1			
Refrigerant control		Linear Expansion Valve		Linear Expansion Valve			
Compressor		Hermetic		Hermetic			
	Model	NE41VMJMT/NE41YEKMT		TNB220FMBH			
	Motor output	kW		1.9		1.6	
	Starter type	Line start		Line start			
	Protection devices	Internal thermostat / Thermal relay HP switch HP switch Discharge thermo Discharge thermo		HP switch Discharge thermo			
Crankcase heater		W		38		—	
Heat exchanger		Plate fin coil		Plate fin coil			
Fan	Fan (drive) × No.			Propeller (direct) × 1		Propeller (direct) × 1	
	Fan motor output		kW	0.07		0.06	
	Airflow		m³/min (CFM)	50 (1,770)		55 (1,940)	
Defrost method		Reverse cycle		Reverse cycle			
Noise level	Cooling	dB (A)		48		47	
	Heating	dB (A)		50		48	
Dimensions	W	mm (in.)		900 (35-7/16)		950 (37-3/8)	
	D	mm (in.)		330+20 (13+1-3/4)		330+30 (13+1-3/16)	
	H	mm (in.)		855 (33-5/8)		943 (37-1/8)	
Weight		kg (lbs)		82 (181)		75 (165)	
Refrigerant		R407C		R410A			
	Charge	kg (lbs)		3.1 (6.8)		3.5 (7.7)	
	Oil (Model)	L		1.2 (Ester) MEL56		0.87 (NEO22)	
Pipe size O.D	Liquid	mm (in.)		9.52 (3/8)			
	Gas	mm (in.)		15.88 (5/8)			
Connection method	Indoor side			Flared			
	Outdoor side			Flared			
Between the indoor & outdoor unit	Height difference			Max. 50m		Max. 30m	
	Piping length			Max. 50m		Max. 50m	

Notes 1. Rating Conditions (ISO 13253 T1)

Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)

Outdoor: D.B.35°C (95°F), W.B.24°C (75°F)

Heating: Indoor: D.B.20°C (68°F)

Outdoor: D.B.7°C (45°F), W.B.6°C (43°F)

Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

	Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C
	Lower limit	D.B.19°C, W.B.15°C
Heating	Upper limit	D.B.28°C
	Lower limit	D.B.17°C
		D.B.46°C
		D.B.-5°C
		D.B.24°C, W.B.18°C
		D.B.-11°C, W.B.-12°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

Item		Service Ref.		PEAD-RP3EA1								
Function				Cooling	Heating	Cooling	Heating					
Capacity	※ 1	Btu/h		25,900	30,800	24,200	27,200					
		W		7,600	9,050	7,100	8,000					
Total input	※ 1	kW		3.35	3.18	2.15	2.34					
Service Ref.		PEAD-RP3EA1										
Power supply		Single phase, 50Hz, 220-240V										
INDOOR UNIT	Input	※ 3	kW		0.35							
	Running current	※ 3	A		1.55							
	Starting current	※ 3	A		2.0							
External finish		Galvanized sheets										
Heat exchanger		Plate fin coil										
Fan	Fan (drive) × No.			Centrifugal (direct) × 2								
	Fan motor output		kW		0.15							
	Airflow (Lo-Hi)		m³/min <CFM>		20-25<706-883>							
	External static pressure		Pa		70/(130)							
Booster heater	※ 3		kW		—							
Operation control & Thermostat		Built in remote controller										
Noise level (Lo-Hi)	dB (A)	70Pa		37-41								
		(130Pa)		40-45								
Unit drain pipe O.D		mm (in.)		R1 (External thread)								
Dimensions	W	mm (in.)		1,175 (46-1/8)								
	D	mm (in.)		740 (29-1/8)								
	H	mm (in.)		325 (12-13/16)								
Weight		kg (lbs)		44 (97)								
Service Ref.		PU(H)-P3VGAA/PU(H)-P3YGAA PU(H)-P3VGAA1/PU(H)-P3YGAA1				PUHZ-RP3VHA						
Power supply		Single phase, 50Hz, 220-240V / 3 phase , 50Hz, 380-415V (4 wires)				Single phase, 50Hz, 220-240V						
OUTDOOR UNIT	Input	kW		3.27	3.48	1.81	2.18					
	Running current	A		14.81/5.29	15.76/5.63	8.04	9.70					
	Starting current	A		93/47		19						
External finish		Munsell 5Y 7/1										
Refrigerant control		Linear Expansion Valve										
Compressor	Compressor		Hermetic									
	Model		NE52VNJMT/NE52YDKMT				TNB220FMBH					
	Motor output	kW		2.5		1.6						
	Starter type		Line start				Line start					
	Protection devices		Internal thermostat HP switch Discharge thermo	Thermal relay HP switch Discharge thermo		HP switch						
Crankcase heater		W		38		Discharge thermo						
Heat exchanger		Plate fin coil						Plate fin coil				
Fan	Fan (drive) × No.		Propeller (direct) × 1				Propeller (direct) × 1					
	Fan motor output	kW		0.07		0.06						
	Airflow	m³/min (CFM)		50 (1,770)		55 (1,940)						
Defrost method		Reverse cycle						Reverse cycle				
Noise level	Cooling	dB (A)		49		47						
	Heating	dB (A)		51		48						
Dimensions	W	mm (in.)		900 (35-7/16)		950 (37-3/8)						
	D	mm (in.)		330+20 (13+1-3/4)		330+30 (13+1-3/16)						
	H	mm (in.)		855 (33-5/8)		943 (37-1/8)						
Weight		kg (lbs)		82 (181)		75 (165)						
REFRIGERANT PIPING	Refrigerant		R407C									
	Charge	kg (lbs)		3.3 (7.3)		3.5 (7.7)						
	Oil (Model)	L		1.3 (Ester) MEL56		0.87 (NEO22)						
Pipe size O.D	Liquid	mm (in.)		9.52 (3/8)								
	Gas	mm (in.)		15.88 (5/8)								
Connection method	Indoor side		Flared									
	Outdoor side		Flared									
Between the indoor & outdoor unit	Height difference		Max. 50m				Max. 30m					
	Piping length		Max. 50m				Max. 50m					

Notes 1. Rating Conditions (ISO 13253 T1)

Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)      Outdoor: D.B.35°C (95°F), W.B.24°C (75°F)  
 Heating: Indoor: D.B.20°C (68°F)      Outdoor: D.B.7°C (45°F), W.B.6°C (43°F)

Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

		Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C	D.B.46°C
	Lower limit	D.B.19°C, W.B.15°C	D.B.-5°C
Heating	Upper limit	D.B.28°C	D.B.24°C, W.B.18°C
	Lower limit	D.B.17°C	D.B.-11°C, W.B.-12°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

Item		Service Ref.		PEAD-RP4EA1									
Function				Cooling	Heating	Cooling	Heating						
Capacity	* 1	Btu/h		32,700	35,100	34,100	38,200						
		W		9,600	10,300	10,000	11,200						
Total input	* 1	kW		3.83	4.00	3.08	3.48						
Service Ref.		PEAD-RP4EA1											
Power supply		Single phase, 50Hz, 220-240V											
INDOOR UNIT	Input	* 3	kW		0.57								
	Running current	* 3	A		2.53								
	Starting current	* 3	A		3.2								
External finish		Galvanized sheets											
Heat exchanger		Plate fin coil											
Fan	Fan (drive) × No.			Centrifugal (direct) × 2									
	Fan motor output		kW		0.24								
	Airflow (Lo-Hi)		m³/min <CFM>		27-34<953-1,200>								
	External static pressure		Pa		70/(130)								
Booster heater	* 3	kW			—								
Operation control & Thermostat		Built in remote controller											
Noise level (Lo-Hi)	dB (A)	70Pa		41-46									
		(130Pa)		42-48									
Unit drain pipe O.D		mm (in.)		R1 (External thread)									
Dimensions	W	mm (in.)		1,415 (55-11/16)									
	D	mm (in.)		740 (29-1/8)									
	H	mm (in.)		325 (12-13/16)									
Weight		kg (lbs)		62 (136)									
Service Ref.		PU(H)-P4VGAA/PU(H)-P4YGAA PU(H)-P4VGAA1/PU(H)-P4YGAA1				PUHZ-RP4VHA							
Power supply		Single phase, 50Hz, 220-240V / 3 phase , 50Hz, 380-415V (4 wires)				Single phase, 50Hz, 220-240V							
OUTDOOR UNIT	Input	kW		3.43	3.62	2.78	3.14						
	Running current	A		15.71/5.55	16.58/5.86	12.33	13.94						
	Starting current	A		99/49		28							
External finish		Munsell 5Y 7/1											
Refrigerant control		Linear Expansion Valve											
Compressor	Compressor		Hermetic										
	Model		NE56VNJMT/NE56YDKMT										
	Motor output		kW	2.7		1.9							
	Starter type		Line start										
	Protection devices		Internal thermostat HP switch Discharge thermo	/ Thermal relay HP switch Discharge thermo		HP switch LP switch Discharge thermo							
Crankcase heater		W				—							
Heat exchanger		Plate fin coil						Plate fin coil					
Fan	Fan (drive) × No.		Propeller (direct) × 2										
	Fan motor output		kW	0.07+0.07		0.06+0.06							
	Airflow		m³/min (CFM)	85 (3,000)		100 (3,530)							
Defrost method		Reverse cycle						Reverse cycle					
Dimensions	Noise level	Cooling	dB (A)	51		49							
		Heating	dB (A)	53		51							
	Dimensions		W	900 (35-7/16)		950 (37-3/8)							
		D	mm (in.)	330+20 (13+1-3/4)		330+30 (13+1-3/16)							
		H	mm (in.)	1,260 (49-5/8)		1,350 (53-1/8)							
Weight		kg (lbs)		96 (212)		121 (267)							
REFRIGERANT PIPING	Refrigerant		R407C										
	Charge		kg (lbs)	4.0 (8.8)		5.5 (12.1)							
	Oil (Model)		L	1.3 (Ester) MEL56		1.4 (MEL56)							
	Pipe size O.D		Liquid	mm (in.)		9.52 (3/8)							
			Gas	mm (in.)		19.05 (3/4)		15.88 (5/8)					
Connection method		Indoor side						Flared					
		Outdoor side						Flared					
Between the indoor & outdoor unit		Height difference						Max. 50m					
		Piping length						Max. 75m					

Notes 1. Rating Conditions (ISO 13253 T1)  
 Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)      Outdoor: D.B.35°C (95°F), W.B.24°C (75°F)  
 Heating: Indoor: D.B.20°C (68°F)      Outdoor: D.B.7°C (45°F), W.B.6°C (43°F)  
 Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

	Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C
	Lower limit	D.B.19°C, W.B.15°C
Heating	Upper limit	D.B.28°C
	Lower limit	D.B.17°C
D.B.-5°C		D.B.-11°C, W.B.-12°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

Item		Service Ref.		PEAD-RP5EA1			
Function				Cooling	Heating	Cooling	Heating
Capacity	* 1	Btu/h		41,600	47,700	42,600	47,700
		W		12,200	14,000	12,500	14,000
Total input	* 1	kW		4.87	4.74	3.69	4.11
INDOOR UNIT	Service Ref.	PEAD-RP5EA1					
	Power supply	Single phase, 50Hz, 220-240V					
	Input	* 3	kW	0.59			
	Running current	* 3	A	2.62			
	Starting current	* 3	A	3.4			
	External finish	Galvanized sheets					
	Heat exchanger	Plate fin coil					
	Fan	Fan (drive) × No.		Centrifugal (direct) × 2			
	Fan motor output		kW	0.27			
	Airflow (Lo-Hi)		m³/min <CFM>	33.5-42<1,183-1,483>			
	External static pressure		Pa	70/(130)			
	Booster heater	* 3	kW	-			
	Operation control & Thermostat			Built in remote controller			
	Noise level (Lo-Hi)	dB (A)	70Pa (130Pa)	44-50 46-52			
	Unit drain pipe O.D		mm (in.)	R1 (External thread)			
	Dimensions	W	mm (in.)	1,415 (55-11/16)			
		D	mm (in.)	740 (29-1/8)			
		H	mm (in.)	325 (12-13/16)			
	Weight		kg (lbs)	65 (143)			
OUTDOOR UNIT	Service Ref.			PU(H)-P5YGAA PU(H)-P5YGAA1	PUHZ-RP5VHA		
	Power supply			3 phase , 50Hz, 380-415V (4 wires)	Single phase, 50Hz, 220-240V		
	Input		kW	4.70	5.04	3.56	3.14
	Running current		A	7.60	8.15	15.80	13.94
	Starting current		A	65.5		28	
	External finish			Munsell 5Y 7/1	Munsell 3Y 7.8/1.1		
	Refrigerant control			Linear Expansion Valve	Linear Expansion Valve		
	Compressor			Hermetic	Hermetic		
	Model			ZR61KCE-TFD-230 (YGAA) ZR61KCW-TFD-522 (YGAA1)	ANV33FDAMT		
	Motor output		kW	3.5		2.4	
REFRIGERANT PIPING	Starter type			Line start	Line start		
	Protection devices			Internal thermostat, Thermal relay HP switch Discharge thermo	HP switch LP switch Discharge thermo		
	Crankcase heater		W	38	-		
	Heat exchanger			Plate fin coil	Plate fin coil		
	Fan	Fan (drive) × No.		Propeller (direct) × 2	Propeller (direct) × 2		
		Fan motor output		0.07+0.07	0.06+0.06		
		Airflow	m³/min (CFM)	95 (3,360)	100 (3,530)		
	Defrost method			Reverse cycle	Reverse cycle		
	Noise level	Cooling	dB (A)	55	49		
		Heating	dB (A)	56	51		
REFRIGERANT PIPING	Dimensions	W	mm (in.)	1,050 (41-5/16)	950 (37-3/8)		
		D	mm (in.)	330+20 (13+1-3/4)	330+30 (13+1-3/16)		
		H	mm (in.)	1,260 (49-5/8)	1,350 (53-1/8)		
	Weight		kg (lbs)	122 (269)	121 (267)		
	Refrigerant			R407C	R410A		
REFRIGERANT PIPING	Charge		kg (lbs)	4.6 (10.1)	5.5 (12.1)		
	Oil (Model)		L	1.690 (Ester) 3MAW-POE	1.4 (MEL56)		
	Pipe size O.D	Liquid	mm (in.)	9.52 (3/8)			
		Gas	mm (in.)	19.05 (3/4)	15.88 (5/8)		
	Connection method	Indoor side		Flared			
REFRIGERANT PIPING		Outdoor side		Flared			
	Between the indoor & outdoor unit	Height difference		Max. 50m	Max. 30m		
		Piping length		Max. 50m	Max. 75m		

Notes 1. Rating Conditions (ISO 13253 T1)

Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)  
Heating: Indoor: D.B.20°C (68°F)

Outdoor: D.B.35°C (95°F), W.B.24°C (75°F)  
Outdoor: D.B.7°C (45°F), W.B.6°C (43°F)

Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

		Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C	D.B.46°C
	Lower limit	D.B.19°C, W.B.15°C	D.B.-5°C
Heating	Upper limit	D.B.28°C	D.B.24°C, W.B.18°C
	Lower limit	D.B.17°C	D.B.-11°C, W.B.-12°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

Item		Service Ref.		PEAD-RP6EA1			
Function				Cooling	Heating	Cooling	Heating
Capacity	* 1	Btu/h		47,700	56,600	47,700	54,500
		W		14,000	16,600	14,000	16,000
Total input	* 1	kW		5.81	5.90	4.91	4.76
INDOOR UNIT	Service Ref.	PEAD-RP6EA1					
	Power supply	Single phase, 50Hz, 220-240V					
	Input	* 3	kW		0.61		
	Running current	* 3	A		2.69		
	Starting current	* 3	A		3.5		
	External finish	Galvanized sheets					
	Heat exchanger	Plate fin coil					
	Fan	Fan (drive) × No.	Centrifugal (direct) × 2				
	Fan motor output	kW		0.27			
	Airflow (Lo-Hi)	m³/min <CFM>		36.5-46<1,288-1,624>			
	External static pressure	Pa		70/(130)			
	Booster heater	* 3	kW		—		
OUTDOOR UNIT	Operation control & Thermostat	Built in remote controller					
	Noise level (Lo-Hi)	dB (A)	70Pa (130Pa)	46-51 47-53			
	Unit drain pipe O.D	mm (in.)		R1 (External thread)			
	Dimensions	W	mm (in.)	1,715 (67-1/2)			
		D	mm (in.)	740 (29-1/8)			
		H	mm (in.)	325 (12-13/16)			
	Weight	kg (lbs)		70 (154)			
	Service Ref.	PU(H)-P6YGAA PU(H)-P6YGAA1			PUHZ-RP6VHA		
	Power supply	3 phase , 50Hz, 380-415V (4 wires)			Single phase, 50Hz, 220-240V		
	Input	kW	5.58	5.91	4.66	4.58	
REFRIGERANT PIPING	Running current	A	9.03	9.56	20.73	20.37	
	Starting current	A		74		30	
	External finish	Munsell 5Y 7/1			Munsell 3Y 7.8/1.1		
	Refrigerant control	Linear Expansion Valve			Linear Expansion Valve		
	Compressor	Hermetic			Hermetic		
	Model	ZR72KCW-TFD-522			ANV33FDAMT		
	Motor output	kW	4.2		2.9		
	Starter type	Line start			Line start		
	Protection devices	Internal thermostat, Thermal relay HP switch Discharge thermo			HP switch LP switch Discharge thermo		
	Crankcase heater	W	38		—		
REFRIGERANT PIPING	Heat exchanger	Plate fin coil			Plate fin coil		
	Fan	Fan (drive) × No.	Propeller (direct) × 2			Propeller (direct) × 2	
	Fan motor output	kW	0.07+0.07		0.06+0.06		
	Airflow	m³/min (CFM)	100 (3,530)		100 (3,530)		
	Defrost method	Reverse cycle			Reverse cycle		
	Noise level	Cooling	dB (A)	57		49	
		Heating	dB (A)	58		51	
	Dimensions	W	mm (in.)	1,050 (41-5/16)		950 (37-3/8)	
		D	mm (in.)	330+20 (13+1-3/4)		330+30 (13+1-3/16)	
		H	mm (in.)	1,260 (49-5/8)		1,350 (53-1/8)	
REFRIGERANT PIPING	Weight	kg (lbs)	122 (269)		121 (267)		
	Refrigerant	R407C			R410A		
	Charge	kg (lbs)	4.9 (10.8)		5.5 (12.1)		
	Oil (Model)	L	1.774 (Ester) 3MAW-POE		1.4 (MEL56)		
	Pipe size O.D	Liquid	mm (in.)	9.52 (3/8)			
		Gas	mm (in.)	19.05 (3/4)		15.88 (5/8)	
	Connection method	Indoor side	Flared			Flared	
REFRIGERANT PIPING	Between the indoor & outdoor unit	Height difference	Max. 50m			Max. 30m	
		Piping length	Max. 50m			Max. 75m	

Notes 1. Rating Conditions (ISO 13253 T1)

Cooling: Indoor: D.B.27°C (80°F), W.B.19°C (66°F)

Outdoor: D.B.35°C (95°F), W.B.24°C (75°F)

Heating: Indoor: D.B.20°C (68°F)

Outdoor: D.B.7°C (45°F), W.B.6°C (43°F)

Refrigerant piping length (one way): 5m (16ft)

2. Guaranteed operating range

	Indoor	Outdoor
Cooling	Upper limit	D.B.35°C, W.B.22.5°C
	Lower limit	D.B.19°C, W.B.15°C
Heating	Upper limit	D.B.28°C
	Lower limit	D.B.17°C
		D.B.-11°C, W.B.-12°C

3. Above data based on indicated voltage

Indoor Unit: Single phase 230V 50Hz

Outdoor Unit: Single phase 230V 50Hz/3 phase 400V 50Hz

























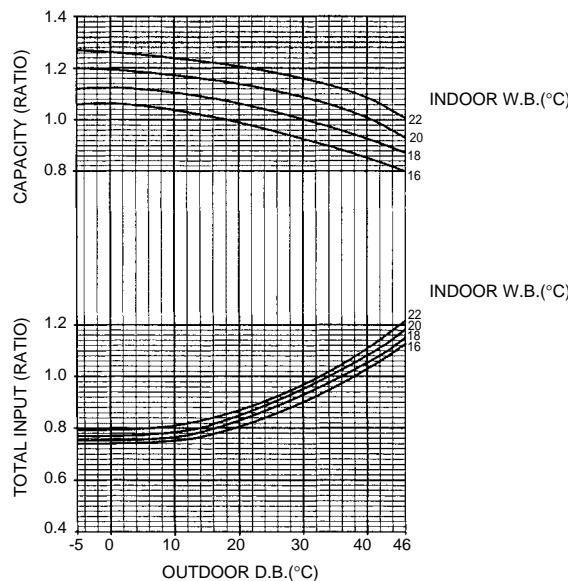




Cooling capacity correction factors

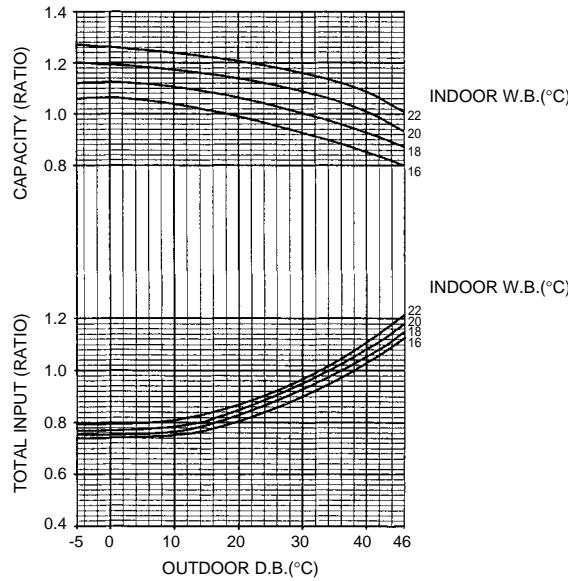
PEAD-RP-EA/PUHZ-RP-VHA

Service Ref.	Refrigerant piping length (one way)															
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m	55m	60m	65m	70m	75m	80m
PEAD-RP1.6EA	1.00	0.992	0.984	0.977	0.969	0.962	0.956	0.949	0.942	0.937	—	—	—	—	—	—
PEAD-RP2EA	1.00	0.985	0.971	0.958	0.943	0.931	0.919	0.908	0.898	0.887	—	—	—	—	—	—
PEAD-RP2.5EA	1.00	0.992	0.984	0.977	0.969	0.962	0.956	0.949	0.942	0.937	—	—	—	—	—	—
PEAD-RP3EA1	1.00	0.989	0.978	0.967	0.956	0.947	0.938	0.930	0.913	0.905	—	—	—	—	—	—
PEAD-RP4EA1	1.00	0.985	0.971	0.958	0.943	0.931	0.919	0.908	0.898	0.887	0.876	0.865	0.855	0.847	0.838	—
PEAD-RP5EA1	1.00	0.982	0.963	0.947	0.930	0.914	0.900	0.885	0.871	0.858	0.845	0.834	0.823	0.812	0.802	—
PEAD-RP6EA1	1.00	0.976	0.953	0.932	0.912	0.893	0.876	0.858	0.842	0.828	0.813	0.800	0.788	0.776	0.764	—



PEAD-RP-EA /PUH-P-VGAA.UK      PUH-P-YGAA.UK  
 PU-P-VGAA.UK      PU-P-YGAA.UK  
 PUH-P-VGAA1.UK      PUH-P-YGAA1.UK  
 PU-P-VGAA1.UK      PU-P-YGAA1.UK

Service Ref.	Refrigerant piping length (one way)									
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m
PEAD-RP1.6EA	1.00	0.993	0.984	0.978	0.969	0.961	0.956	0.948	—	—
PEAD-RP2EA	1.00	0.993	0.984	0.978	0.969	0.961	0.956	0.948	—	—
PEAD-RP2.5EA	1.00	0.989	0.980	0.970	0.960	0.950	0.940	0.930	0.920	0.910
PEAD-RP3EA1	1.00	0.981	0.968	0.952	0.940	0.925	0.913	0.900	0.886	0.874
PEAD-RP4EA1	1.00	0.989	0.980	0.970	0.960	0.950	0.940	0.930	0.920	0.910
PEAD-RP5EA1	1.00	0.981	0.968	0.952	0.940	0.925	0.913	0.900	0.886	0.874
PEAD-RP6EA1	1.00	0.975	0.955	0.935	0.918	0.900	0.884	0.869	0.855	0.840

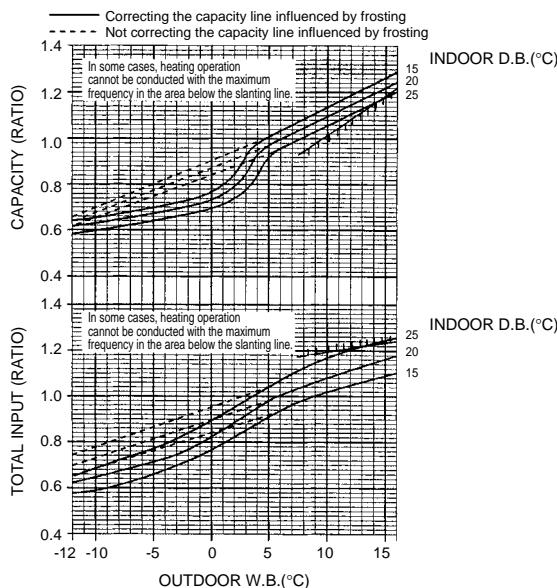




Heating capacity correction factor

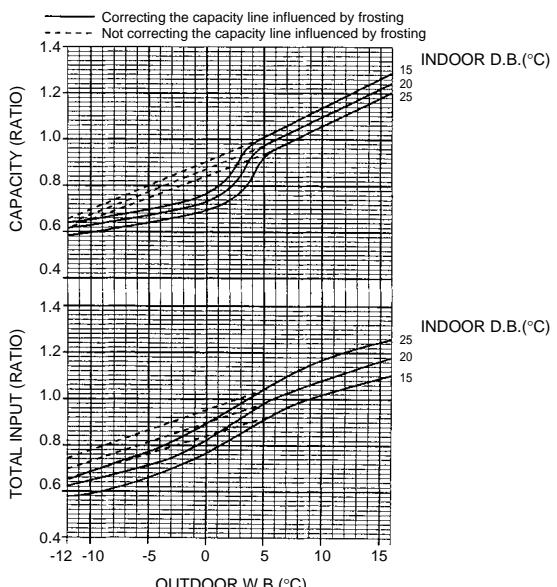
PEAD-RP-EA/PUHZ-RP-VHA

Service Ref.	Refrigerant piping length (one way)															
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m	55m	60m	65m	70m	75m	80m
PEAD-RP1.6EA	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	—	—	—	—	—	—
PEAD-RP2EA	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	—	—	—	—	—	—
PEAD-RP2.5EA	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	—	—	—	—	—	—
PEAD-RP3EA1	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	—	—	—	—	—	—
PEAD-RP4EA1	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	0.970	0.967	0.964	0.961	0.958	—
PEAD-RP5EA1	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	0.970	0.967	0.964	0.961	0.958	—
PEAD-RP6EA1	1.00	0.997	0.994	0.991	0.988	0.985	0.982	0.979	0.976	0.973	0.970	0.967	0.964	0.961	0.958	—



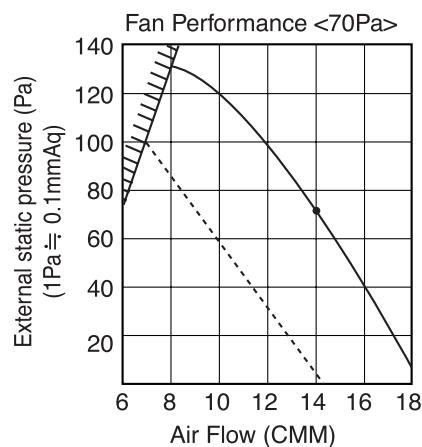
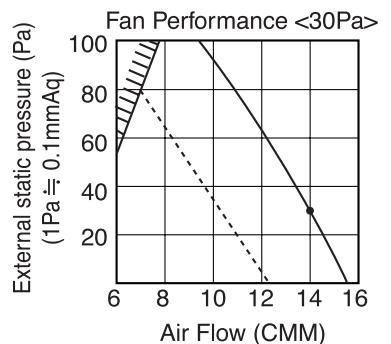
PEAD-RP-EA/PUH-P-VGAA.UK      PUH-P-YGAA.UK  
 PU-P-VGAA.UK      PU-P-YGAA.UK  
 PUH-P-VGAA1.UK      PUH-P-YGAA1.UK  
 PU-P-VGAA1.UK      PU-P-YGAA1.UK

Service Ref.	Refrigerant piping length (one way)									
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m
PEAD-RP1.6EA	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	—	—
PEAD-RP2EA	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	—	—
PEAD-RP2.5EA	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	0.980	0.978
PEAD-RP3EA1	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	0.980	0.978
PEAD-RP4EA1	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	0.980	0.978
PEAD-RP5EA1	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	0.980	0.978
PEAD-RP6EA1	1.00	0.998	0.995	0.993	0.990	0.988	0.985	0.983	0.980	0.978

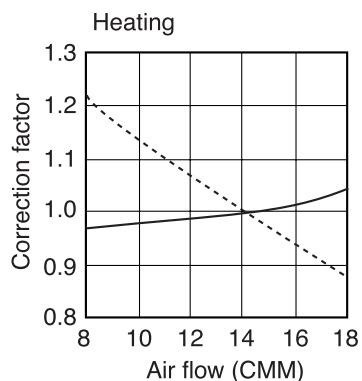
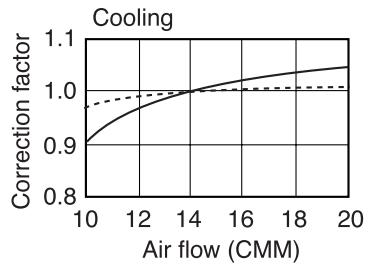


## 2 . FAN PERFORMANCE AND CORRECTED AIR FLOW

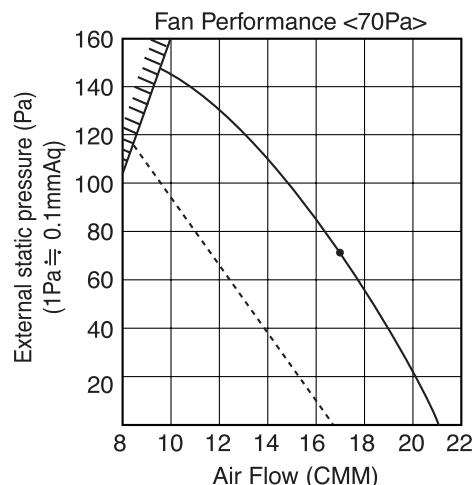
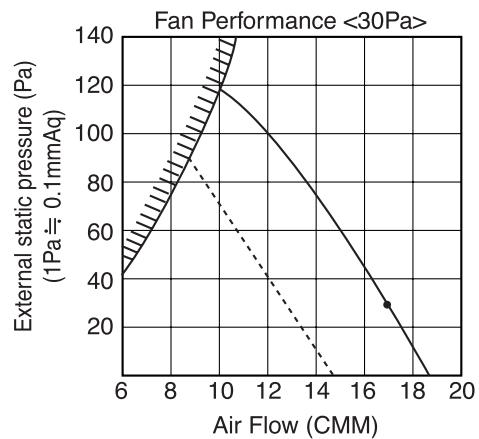
### PEAD-RP1.6EA



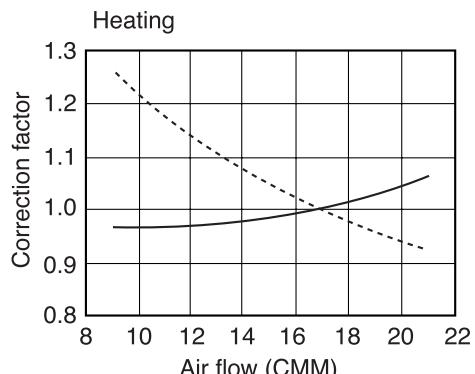
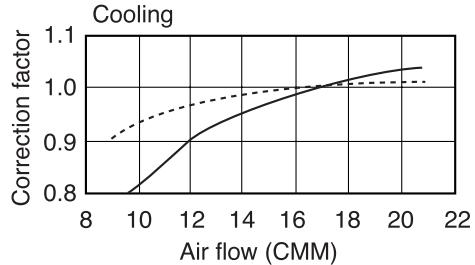
Corrected Air Flow     — Capacity  
                          - - - input



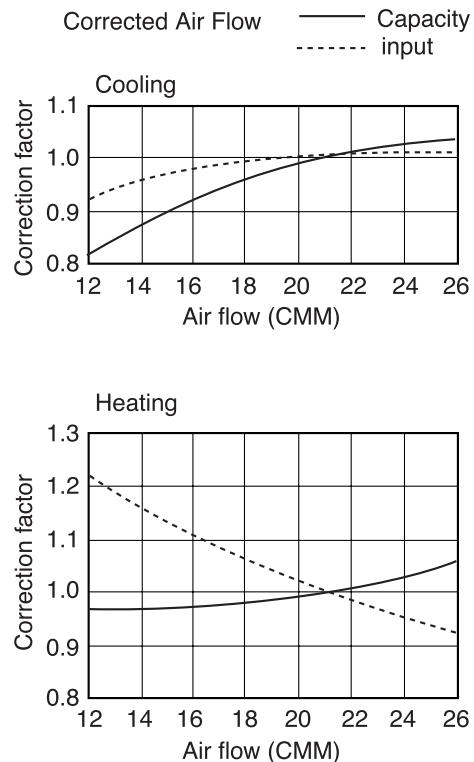
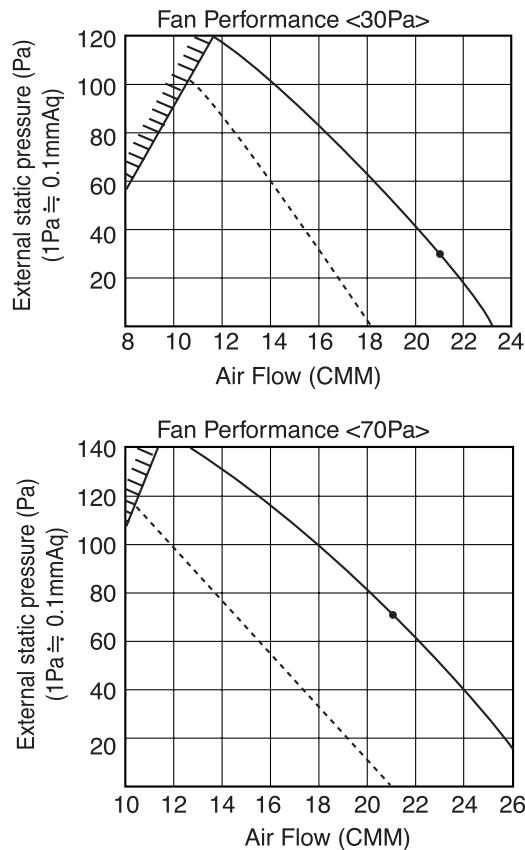
### PEAD-RP2EA



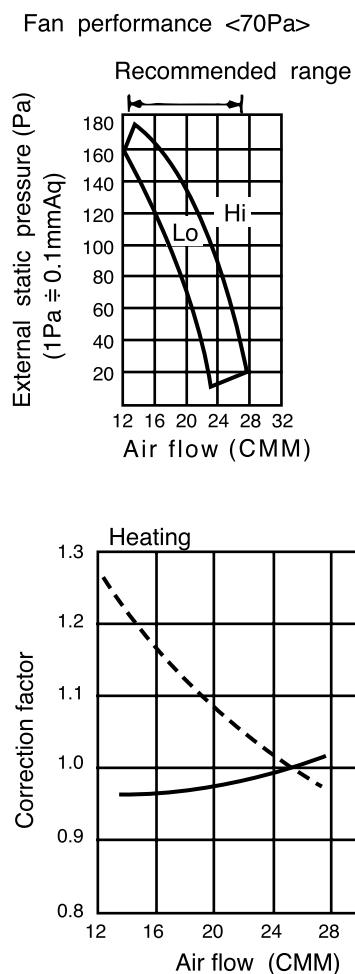
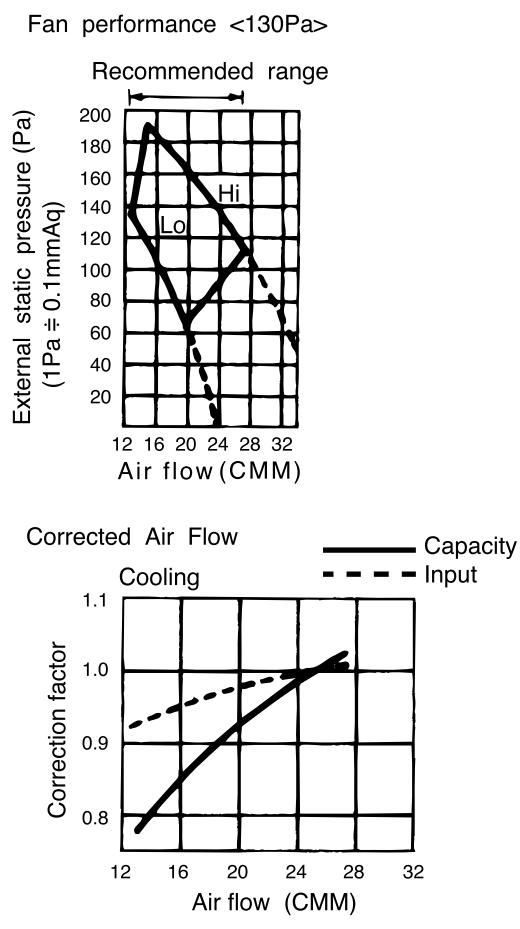
Corrected Air Flow     — Capacity  
                          - - - input



## PEAD-RP2.5EA

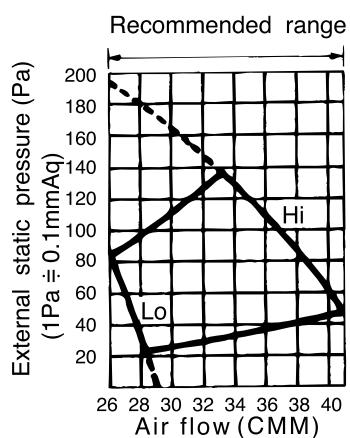


## PEAD-RP3EA1

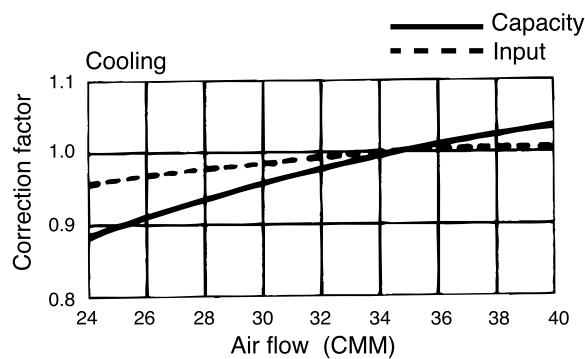


## PEAD-RP4EA1

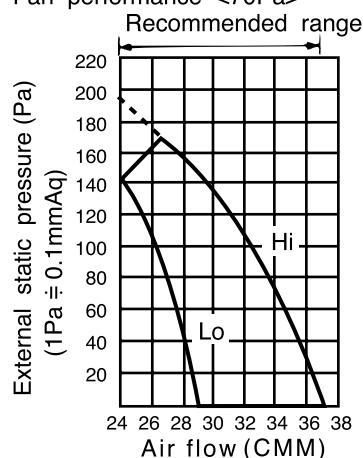
Fan performance <130Pa>



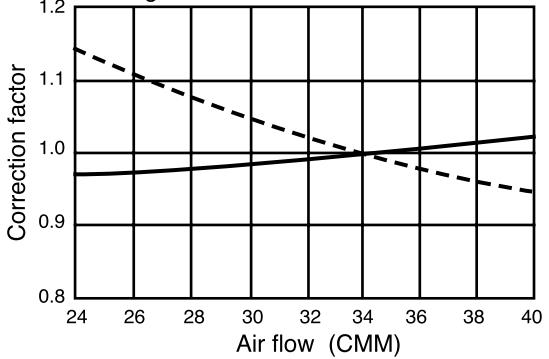
Corrected Air Flow



Fan performance <70Pa>

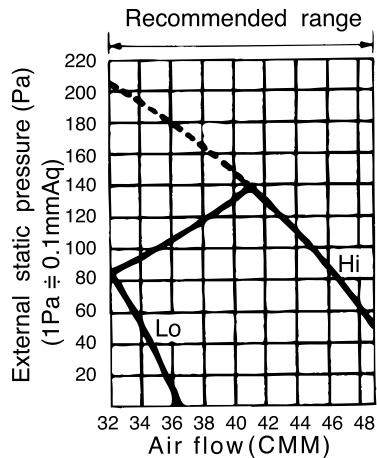


Heating

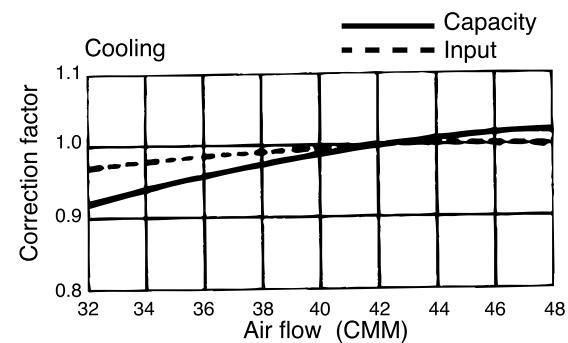


## PEAD-RP5EA1

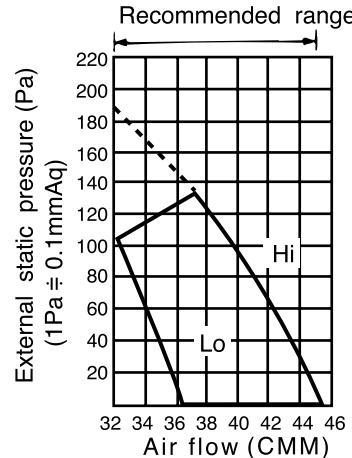
Fan performance <130Pa>



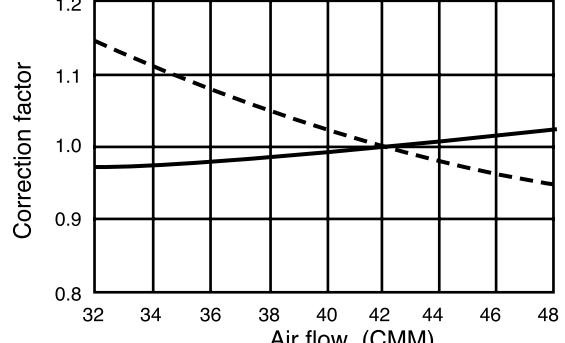
Corrected Air Flow



Fan performance <70Pa>

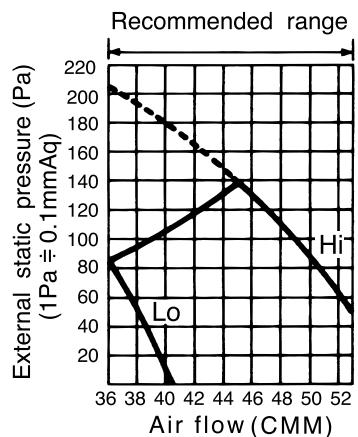


Heating

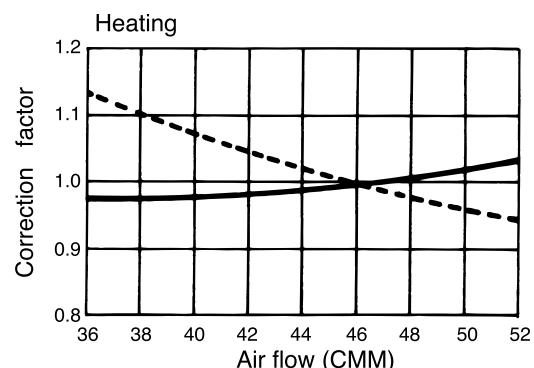
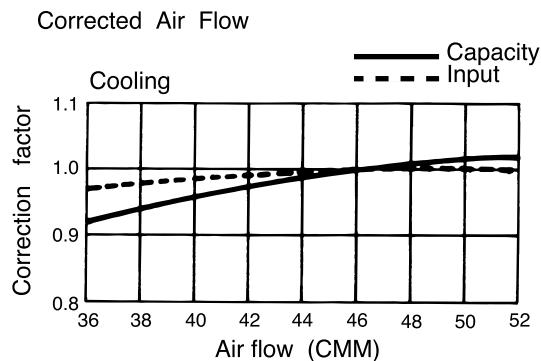
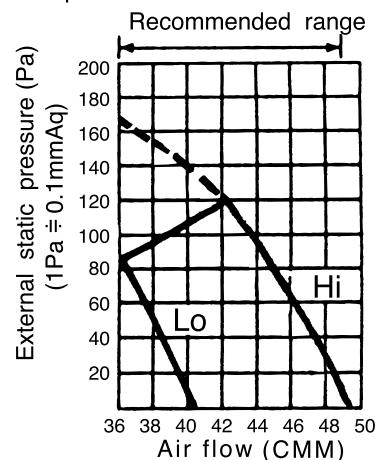


## PEAD-RP6EA1

Fan performance <130Pa>



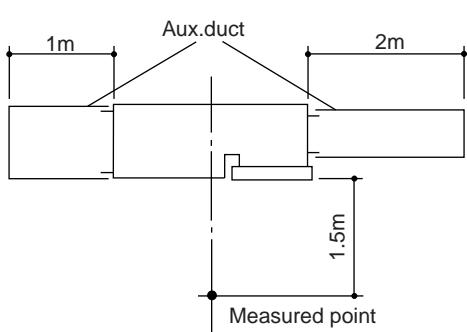
Fan performance <70Pa>



### 3 . SOUND LEVELS

#### 1) Noise level

Ceiling concealed



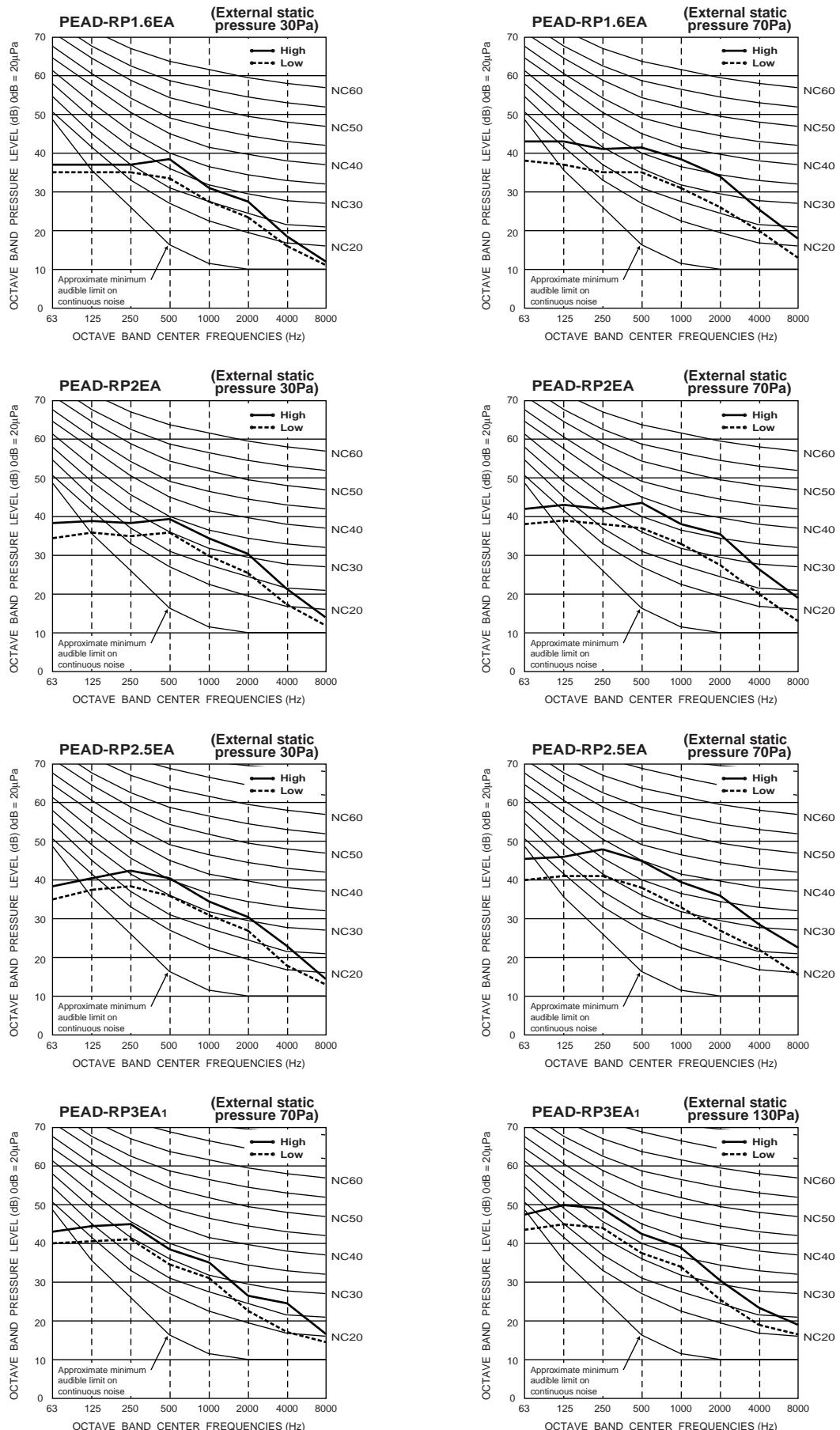
Noise level at anechoic room (Low-High)

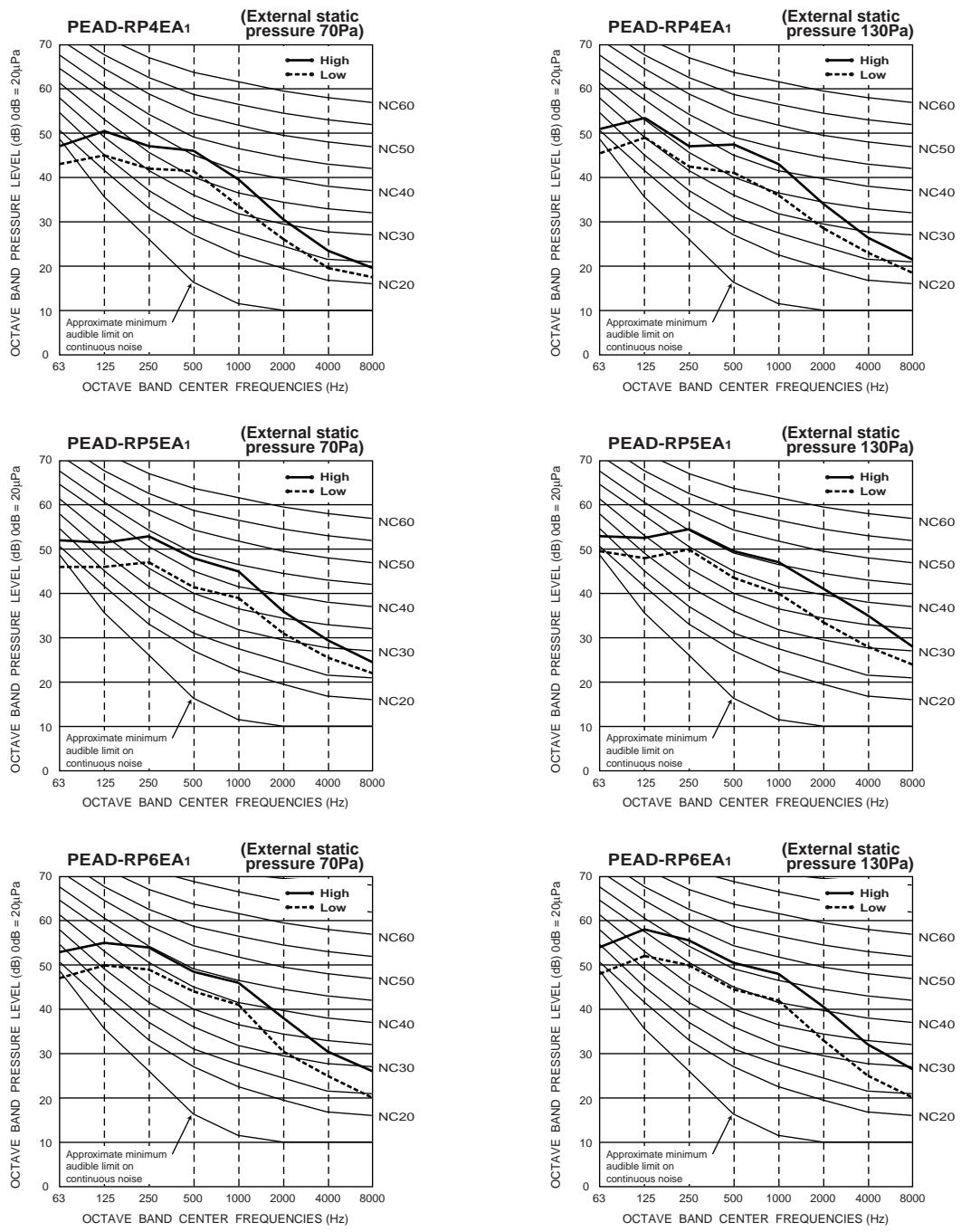
Unit : dB(A)

Model	External static pressure		
	30Pa	70Pa	130Pa
PEAD-RP1.6EA	34-38	36-43	-
PEAD-RP2EA	36-40	38-44	-
PEAD-RP2.5EA	37-41	39-46	-
PEAD-RP3EA1	-	37-41	40-45 *
PEAD-RP4EA1	-	41-46	42-48 *
PEAD-RP5EA1	-	44-50	46-52 *
PEAD-RP6EA1	-	46-51	47-53 *

\* Optional motor

## 2) NC curves

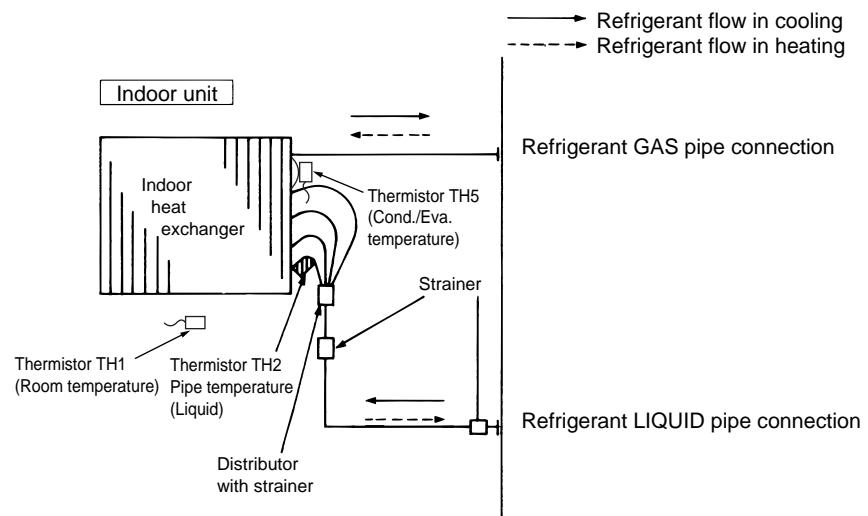




## 6 REFRIGERANT SYSTEM DIAGRAM

PEAD-RP1.6, 2, 2.5EA

PEAD-RP3, 4, 5, 6EA1

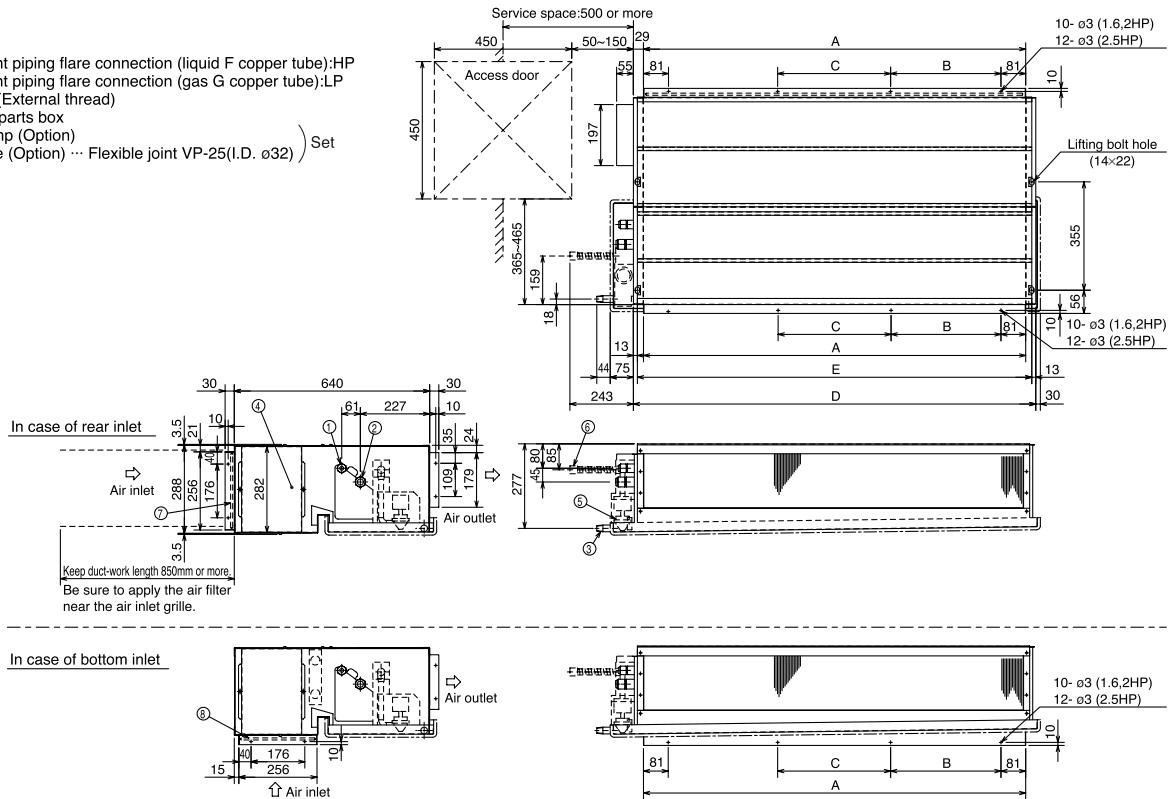


## 1. INDOOR UNIT

## PEAD-RP1.6, 2, 2.5EA

Model	A	B	C	D	E	F	G
RP1.6,2	772	305	—	830	804	FOR PUHZ-RP TYPE:6.35 FOR PU(H)-P TYPE:9.52	FOR PUHZ-RP TYPE:12.7 FOR PU(H)-P TYPE:15.88
RP2.5	1012	280	290	1070	1044	9.52	15.88

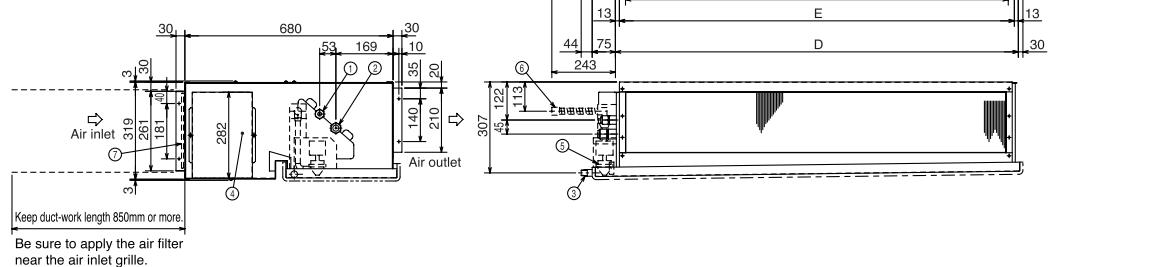
- ① Refrigerant piping flare connection (liquid F copper tube):HP  
 ② Refrigerant piping flare connection (gas G copper tube):LP  
 ③ Drain R1(External thread)  
 ④ Electrical parts box  
 ⑤ Drain Pump (Option)  
 ⑥ Drain Pipe (Option) ... Flexible joint VP-25(I.D. ø32)  
 ⑦ Filter



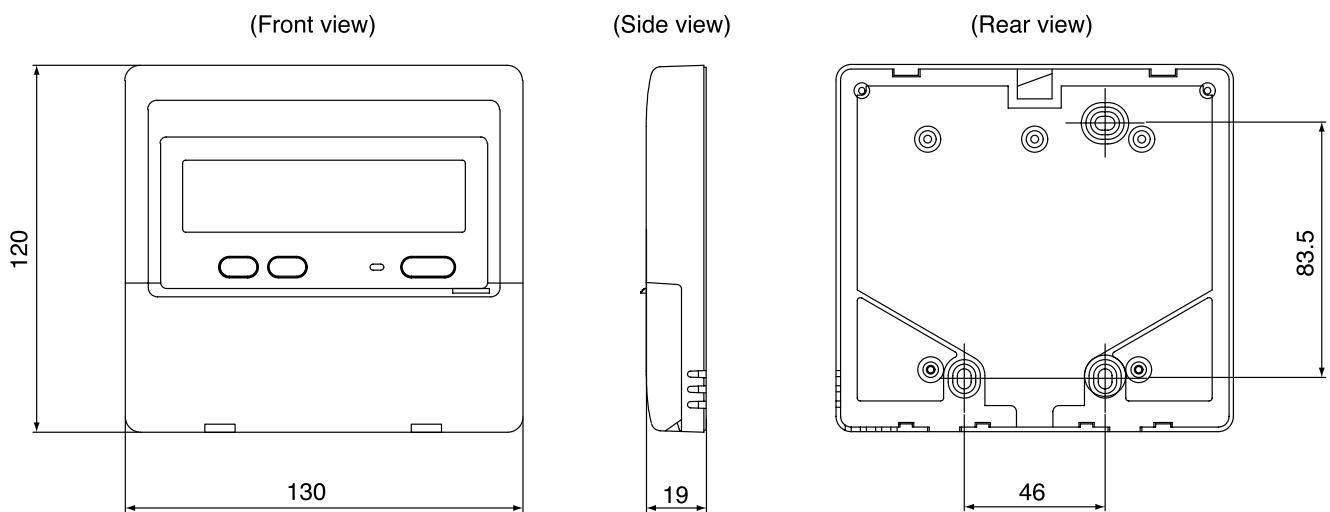
## PEAD-RP3, 4, 5, 6EA1

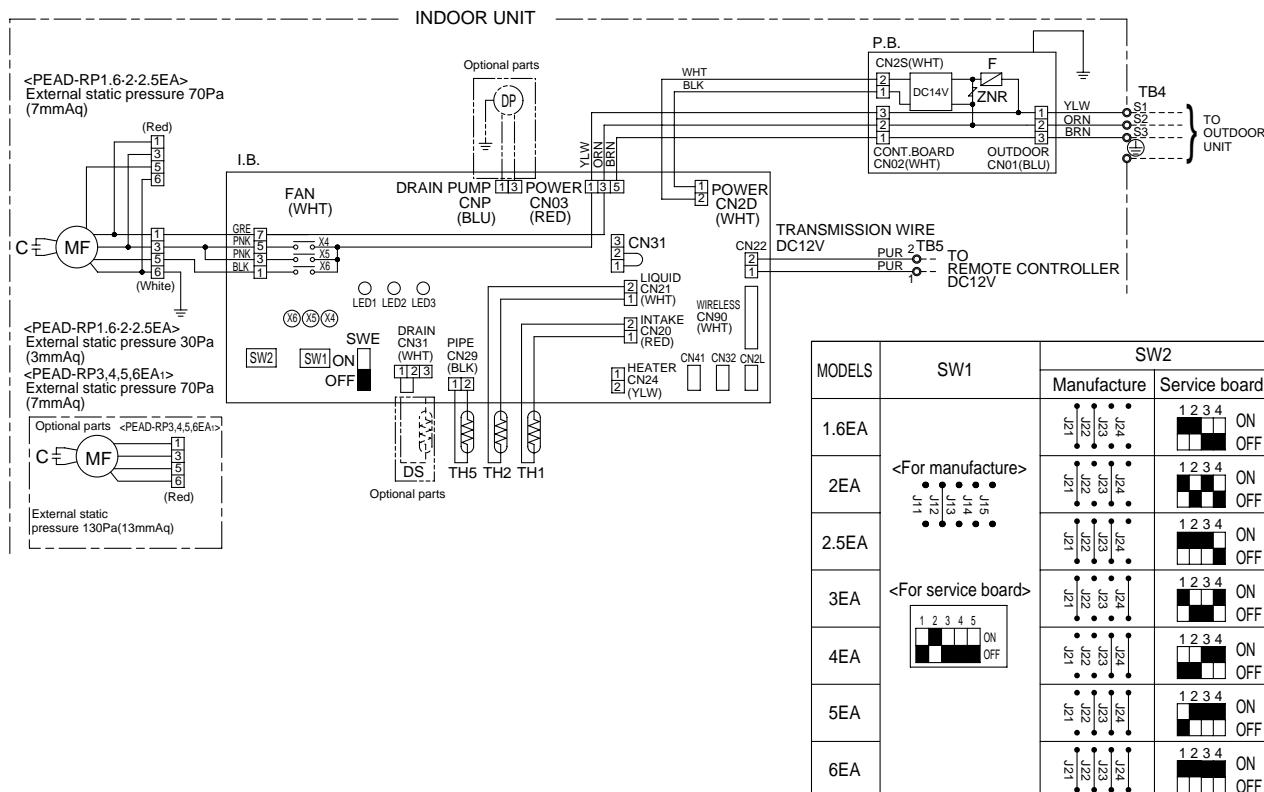
Model	A	B	C	D	E	F
RP3	1012	280	290	1070	1044	15.88
RP4-5	1252	360	370	1310	1284	FOR PUHZ-RP TYPE:15.88
RP6	1552	460	470	1610	1584	FOR PU(H)-P TYPE:19.05

- ① Refrigerant piping flare connection (liquid ø9.52 copper tube):HP  
 ② Refrigerant piping flare connection (gas øF copper tube):LP  
 ③ Drain R1 (External thread)  
 ④ Electrical parts box  
 ⑤ Drain Pump (Option)  
 ⑥ Drain Pipe (Option) ... Flexible joint VP25(I.D.ø32)  
 ⑦ Filter



## 2. REMOTE CONTROLLER





SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
I.B.	INDOOR CONTROLLER BOARD	P.B.	INDOOR POWER BOARD	C	CAPACITOR(FAN MOTOR)
CN2L	CONNECTOR(LOSSNAY)	F1	FUSE(4A)	MF	FAN MOTOR
CN32	CONNECTOR(REMOTE SWITCH)	ZNR	VARISTOR	TB5	TERMINAL BLOCK(REMOTE CONTROLLER)
CN41	CONNECTOR(HA TERMINAL-A)			TB4	TERMINAL BLOCK (INDOOR/OUTDOOR CONNECTING LINE)
LED1	POWER SUPPLY(I.B.)	DRAIN PUMP (OPTIONAL PARTS)		TH1	ROOM TEMPERATURE THERMISTOR (0°C/15KΩ, 25°C/5.4KΩ DETECT)
LED2	POWER SUPPLY(REMOTE CONTROLLER)	DP	DRAIN PUMP	TH2	PIPE TEMPERATURE THERMISTOR/LIQUID (0°C/15KΩ, 25°C/5.4KΩ DETECT)
LED3	TRANSMISSION(INDOOR-OUTDOOR)	DS	DRAIN SENSOR	TH5	COND./EVA. TEMPERATURE THERMISTOR (0°C/15KΩ, 25°C/5.4KΩ DETECT)
SW1	JUMPER WIRE(MODEL SELECTION)				
SW2	JUMPER WIRE(CAPACITY CORD)				
SWE	SWITCH(EMERGENCY OPERATION)				
X4	RELAY(FAN MOTOR)				
X5	RELAY(FAN MOTOR)				
X6	RELAY(FAN MOTOR)				

## 9-1. TROUBLE-SHOOTING

### <Error code display by self-diagnosis and actions to be taken for service (summary)>

Present and past error codes are logged and displayed on the wired remote controller and control board of outdoor unit. Actions to be taken for service, which depends on whether or not the inferior phenomenon is reoccurring at service, are summarized in the table below. Check the contents below before investigating details.

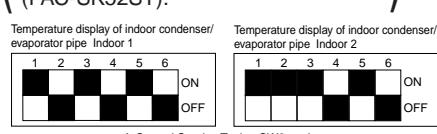
Unit conditions at service	Error code	Actions to be taken for service (summary)
The inferior phenomenon is reoccurring.	Displayed	Judge what is wrong and take a corrective action according to "Self-diagnosis action table" (P.41).
	Not displayed	Conduct trouble shooting and ascertain the cause of the inferior phenomenon according to "Trouble shooting by inferior phenomena" (P.44).
The inferior phenomenon is not reoccurring.	Logged	<ul style="list-style-type: none"> <li>① Consider the temporary defects such as the work of protection devices in the refrigerant circuit including compressor, poor connection of wiring, noise and etc. Recheck the symptom, and check the installation environment, refrigerant amount, weather when the inferior phenomenon occurred, matters related to wiring and etc.</li> <li>② Reset error code logs and restart the unit after finishing service.</li> <li>③ There is no abnormality concerning of parts such as electrical component, controller board, remote controller and etc.</li> </ul>
	Not logged	<ul style="list-style-type: none"> <li>① Recheck the abnormal symptom.</li> <li>② Conduct trouble shooting and ascertain the cause of the inferior phenomenon according to "Trouble shooting by inferior phenomena" (P.44).</li> <li>③ Continue to operate unit for the time being if the cause is not ascertained.</li> <li>④ There is no abnormality concerning of parts such as electrical component, controller board, remote controller and etc.</li> </ul>

## 9-2. SELF-DIAGNOSIS ACTION TABLE

Note: Refer to the manual of outdoor unit for the details of display such as F, U, and other E.

Error Code	Meaning of error code and detection method	Case	Judgment and action
P1	<b>Abnormality of room temperature thermistor (TH1)</b> <ul style="list-style-type: none"> <li>① The unit is in three-minute resume prevention mode if short/open of thermistor is detected. Abnormal if the unit does not reset normally after three minutes. (The unit returns to normal operation, if it has normally reset.)</li> <li>② Constantly detected during cooling, drying, and heating operation. Short: 90°C or more Open: -40°C or less</li> </ul>	<ul style="list-style-type: none"> <li>① Defective thermistor characteristics</li> <li>② Contact failure of connector (Insert failure)</li> <li>③ Breaking of wire or contact failure of thermistor wiring</li> <li>④ Defective indoor control p.c. board</li> </ul>	<ul style="list-style-type: none"> <li>①–③ Check resistance value of thermistor. 0°C .....15.0kΩ 10°C .....9.6kΩ 20°C .....6.3kΩ 30°C .....4.3kΩ 40°C .....3.0kΩ</li> <li>If you put force on (draw or bend) the lead wire while measuring resistance value of thermistor broken wire or contact failure can be detected.</li> <li>② Check contact failure of connector. Put the power on again and check restart after inserting connector again.</li> <li>④ Check room temperature display on remote controller Replace indoor control p.c. board if there is abnormal difference with actual room temperature.</li> <li>There is no abnormality if none of the above happens within the unit. Put the power off, and on again to operate.</li> </ul>
P2	<b>Abnormality of pipe temperature thermistor/Liquid (TH2)</b> <ul style="list-style-type: none"> <li>① The unit is in three-minute resume prevention mode if short/open of thermistor is detected. Abnormal if the unit does not reset normally after three minutes. (The unit returns to normal operation, if it has normally reset.)</li> <li>② Constantly detected during cooling, drying, and heating (except defrosting) operation. Short: 90°C or more Open: -40°C or less</li> </ul>	<ul style="list-style-type: none"> <li>① Defective thermistor characteristics</li> <li>② Contact failure of connector (Insert failure)</li> <li>③ Breaking of wire or contact failure of thermistor wiring</li> <li>④ Defective refrigerant circuit is causing thermistor temperature of 90°C or more or -40°C or less.</li> <li>⑤ Defective indoor control p.c. board.</li> </ul>	<ul style="list-style-type: none"> <li>①–③ Check resistance value of thermistor. For characteristics, refer to (P1) above.</li> <li>② Check contact failure of connector Put the power on and check restart after inserting connector again.</li> <li>④ Check pipe &lt;liquid&gt; temperature with remote controller in test run mode. If pipe &lt;liquid&gt; temperature is excessively low (in cooling mode) or high (in heating mode), refrigerant circuit may be defective.</li> <li>⑤ Check pipe &lt;liquid&gt; temperature with remote controller in test run mode. If there is excessive difference with actual pipe &lt;liquid&gt; temperature, replace indoor control p.c. board.</li> <li>There is no abnormality if none of the above happens within the unit. Put the power off, and on again to operate.</li> </ul>
P4	<b>Abnormality of drain sensor (DS)</b> <ul style="list-style-type: none"> <li>① Suspensive abnormality, if short/open of thermistor is detected for 30 seconds continuously. Put off compressor and indoor fan.</li> <li>② Short/open is detected for 30 seconds continuously during suspensive abnormality. (The unit returns to normal operation, if it has normally reset.)</li> <li>③ Detect the following condition. <ul style="list-style-type: none"> <li>• During cooling and drying operation.</li> <li>• In case that pipe &lt;liquid&gt; temperature-room temperature &lt;-10deg (Except defrosting)</li> <li>• When pipe &lt;liquid&gt; temperature or room temperature is short/open temperature.</li> <li>• During drain pump operation.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>① Defective thermistor characteristics</li> <li>② Contact failure of connector (Insert failure)</li> <li>③ Breaking of wire or contact failure of drain sensor wiring</li> <li>④ Defective indoor control p.c. board.</li> </ul>	<ul style="list-style-type: none"> <li>①–③ Check resistance value of thermistor. 0°C .....6.0kΩ 10°C .....3.9kΩ 20°C .....2.6kΩ 30°C .....1.8kΩ 40°C .....1.3kΩ</li> <li>② Check contact failure of connector. Put the power on again and check restart after inserting connector again.</li> <li>④ Replace indoor control p.c. board if drain pump operates with the line of drain sensor connector CN31-① and ② is short-circuited, and abnormality reappears.</li> <li>There is no abnormality if none of the above happens within the unit. Put the power off, and on again to operate.</li> </ul>
P5	<b>Malfunction of drain pump</b> <ul style="list-style-type: none"> <li>① Suspensive abnormality, if thermistor of drain sensor is allowed to heat by itself and temperature rises slightly. Put off compressor and indoor fan.</li> <li>② Drain pump is abnormal if the condition above is detected during suspensive abnormality.</li> <li>③ Constantly detected during drain pump operation.</li> </ul>	<ul style="list-style-type: none"> <li>① Malfunction of drain pump</li> <li>② Defective drain Clogged drain pump Clogged drain pipe</li> <li>③ Attached drop of water at the drain sensor <ul style="list-style-type: none"> <li>• Drops of drain trickles from lead wire.</li> <li>• Clogged filter is causing wave in drain pan.</li> </ul> </li> <li>④ Defective indoor control p.c. board.</li> </ul>	<ul style="list-style-type: none"> <li>① Check if drain-up machine works.</li> <li>② Check drain function.</li> <li>③ Check the setting of lead wire of drain sensor and check filter condition.</li> <li>④ Replace indoor control p.c. board if drain pump operates with the line of drain sensor connector CN31-① and ② is short-circuited and abnormality reappears.</li> <li>There is no abnormality if none of above comes within the unit. Put the power off, and on again to operate.</li> </ul>

Error Code	Meaning of error code and detection method	Case	Judgment and action
P6	<p><b>Freezing/overheating protection is working</b></p> <p>① Freezing protection (Cooling mode) The unit is in six-minute resume prevention mode if pipe &lt;liquid or condenser-evaporator&gt; temperature stays under -15°C for three minutes, three minutes after the compressor started. Abnormal if it stays under -15°C for three minutes again within 16 minutes after six-minute resume prevention mode.</p> <p>② Frost abnormality (Only for the combination with inverter-type outdoor unit) Suspensive abnormal if unit operates in frost prevention mode (below) for 9 minutes or more. After that, when frost prevention mode is released and compressor restarts its operation, unit is not detected as abnormal if compressor keeps operating for 20 minutes continuously and abnormal if compressor stops operating within 20 minutes and unit operates in frost prevention mode for more than 9 minutes again. (Not abnormal if unit stops operating in frost prevention mode within 9 minutes)</p> <p>&lt;Frost prevention mode&gt; If pipe &lt;liquid or condenser-evaporator&gt; temperature is 2°C or below when 16 minutes has passed after compressor starts operating, unit will start operating in frost prevention mode which stops compressor operation. After that, when pipe &lt;liquid or condenser-evaporator&gt; temperature stays 10°C or more for 3 minutes, frost prevention mode will be released and compressor will restart its operation.</p> <p>③ Overheating protection (Heating mode) The units in six-minute resume prevention mode if pipe &lt;condenser-evaporator&gt; temperature is detected as over 74°C after the compressor started. Abnormal if the temperature of over 74°C is detected again within 10 minutes after six-minute resume prevention mode.</p>	<p>(Cooling or drying mode)</p> <p>① Clogged filter (reduced airflow) ② Short cycle of air path ③ Low-load (low temperature) operation beyond the tolerance range ④ Defective indoor fan motor Fan motor is defective. Control board is defective. ⑤ Defective outdoor fan control (middle season, winter season) ⑥ Overcharge of refrigerant ⑦ Defective refrigerant circuit (clogs)</p> <p>(Heating mode)</p> <p>① Clogged filter (reduced airflow) ② Short cycle of air path ③ Over-load (high temperature) operation beyond the tolerance range ④ Defective indoor fan motor Fan motor is defective. Control board is defective. ⑤ Malfunction of outdoor fan. (Season when air conditioner is not used.) ⑥ Overcharge of refrigerant ⑦ Defective refrigerant circuit (clogs) ⑧ Bypass circuit of outdoor unit is defective.</p>	<p>(Cooling or drying mode)</p> <p>① Check clogs of the filter. ② Remove shields. ④ Measure the resistance of fan motor's winding. Measure the output voltage of fan's connector (FAN) on control board. ※The control board should be normal when a current of AC100V to 240V is detected while fan motor is connected. ⑤ Check action of outdoor fan motor. ⑥~⑦Check operating condition of refrigerant circuit.</p> <p>(Heating mode)</p> <p>① Check filter condition. ② Remove shields. ④ Measure the resistance at fan motor's winding. Measure the output voltage at fan's connector (FAN) on control board. ※The control board should be normal when a current of AC100V to 240V is detected while fan motor is connected. ⑤ Check the operation of fan motor in outdoor unit. ⑥~⑧Check operating condition of refrigerant circuit.</p>
P8	<p><b>Abnormality of pipe temperature</b></p> <p>(Cooling mode)</p> <p>Detected as abnormal when the pipe temperature is not in the cooling range 3 minutes later of compressor start and 6 minutes later of the liquid or condenser/evaporator pipe is out of cooling range.</p> <p>Note 1) It takes at least 9 min. to detect abnormality.</p> <p>Note 2) Abnormality P8 is not detected in drying mode.</p> <p>Cooling range- = TH – intake temperature <math>\leq 3</math> deg</p> <p>TH: Lower temperature between: liquid pipe temperature and condenser/ evaporator temperature</p> <p>(Heating mode)</p> <p>When 10 seconds have passed after the compressor starts operation and the hot adjustment mode has finished, the unit is detected as abnormal when condenser/evaporator pipe temperature is not in heating range within 20 minutes.</p> <p>Note 3) It takes at least 27 minutes to detect abnormality.</p> <p>Note 4) It excludes the period of defrosting (Detection restarts when defrosting mode is over)</p> <p>Heating operation = 3 deg <math>\leq</math> (Condenser/ Evaporator temperature – intake temperature)</p>	<p>① Slight temperature difference between indoor room temperature and pipe &lt;liquid or condenser-evaporator&gt; temperature thermistor</p> <ul style="list-style-type: none"> <li>• Shortage of refrigerant</li> <li>• Disconnected holder of pipe &lt;liquid or condenser-evaporator&gt; thermistor</li> <li>• Defective refrigerant circuit</li> </ul> <p>② Converse connection of extension pipe (on plural units connection)</p> <p>③ Converse wiring of indoor/outdoor unit connecting wire (on plural units connection)</p> <p>④ Defective detection of indoor room temperature and pipe &lt;liquid or condenser-evaporator&gt; temperature thermistor</p> <p>⑤ Defective stop valve action (Ensure stop valve is fully open.)</p>	<p>①④ Check pipe &lt;liquid or condenser-evaporator&gt; temperature with room temperature display on remote controller and outdoor control board.</p> <p>In case of checking pipe temperature with outdoor control board, be sure to connect A-control service tool (PAC-SK52ST).</p> <p>Temperature display of indoor liquid pipe Indoor 1</p> <p>Temperature display of indoor condenser/evaporator pipe Indoor 1</p> <p>Temperature display of indoor liquid pipe Indoor 2</p> <p>Temperature display of indoor condenser/evaporator pipe Indoor 2</p> <p>A-Control Service Tool SW2 setting</p> <p>②③ Check converse connection of extension pipe or converse wiring of indoor/outdoor unit connecting wire.</p>

Error Code	Meaning of error code and detection method	Case	Judgment and action
P9	<p><b>Abnormality of pipe temperature thermistor / Condenser-Evaporator (TH5)</b></p> <p>① The unit is in three-minute resume protection mode if short/open of thermistor is detected. Abnormal if the unit does not get back to normal within three minutes. (The unit returns to normal operation, if it has normally reset.)</p> <p>② Constantly detected during cooling, drying, and heating operation (except defrosting) Short: 90°C or more Open: -40°C or less</p>	<p>① Defective thermistor characteristics</p> <p>② Contact failure of connector (Insert failure)</p> <p>③ Breaking of wire or contact failure of thermistor wiring</p> <p>④ Temperature of thermistor is 90°C or more or -40°C or less caused by defective refrigerant circuit.</p> <p>⑤ Defective indoor control p.c. board</p>	<p>①-③ Check resistance value of thermistor. For characteristics, refer to (P1) above.</p> <p>② Check contact failure of connector Put the power on and check restart after inserting connector again.</p> <p>④ Operate in test run mode and check pipe &lt;condenser-evaporator&gt; temperature with outdoor control p.c. board. If pipe &lt;condenser-evaporator&gt; temperature is excessively low (in cooling mode) or high (in heating mode), refrigerant circuit be have defective.</p> <p>⑤ Operate in test run mode and check pipe &lt;condenser-evaporator&gt; temperature with outdoor control p.c. board. If there is excessive difference with actual pipe &lt;condenser-evaporator&gt; temperature replace indoor control p.c. board</p> <p>There is no abnormality if none of the above happens within the unit. Put the power off and on again to operate.</p> <p>In case of checking pipe temperature with outdoor control p.c. board, be sure to connect A-control service tool (PAC-SK52ST).</p>  <p>A-Control Service Tool SW2 setting</p>
E4	<p><b>Remote controller signal receiving error</b></p> <p>① Abnormal if indoor control p.c. board can not receive normally any data from remote controller or from other indoor control p.c. board for three minutes.</p> <p>② Indoor control p.c. board cannot receive any signal from remote controller for two minutes.</p>	<p>① Contact failure at transmission wire of remote controller</p> <p>② All remote controllers are set as "sub" remote controller. In this case, E0 is displayed on remote controller, and E4 is displayed at outdoor LED.</p> <p>③ Defective transmitting receiving circuit of remote controller</p> <p>④ Defective transmitting receiving circuit of indoor control p.c. board</p> <p>⑤ Noise has entered into the transmission wire of remote controller.</p>	<p>① Check disconnection or looseness of indoor unit or transmission wire of remote controller.</p> <p>② Set one of the remote controllers "main". If there is no problem with the action above.</p> <p>③ Diagnose remote controllers.</p> <p>a) When "RC OK" is displayed, Remote controllers have no problem. Put the power off, and on again to check. If abnormality generates again, replace indoor control p.c. board.</p> <p>b) When "RC NG" is displayed, Replace remote controller.</p> <p>c) When "RC E3" is displayed,</p> <p>d) When "ERC 00-06" is displayed, →Noise may be causing abnormality. ※ If the unit is not normal after replacing indoor control p.c. board in group control, indoor control p.c. board of address "0" may be abnormal.</p>
E5	<p><b>Remote controller transmitting error</b></p> <p>① Abnormal if indoor control p.c. board cannot check the blank of transmission path for three minutes.</p> <p>② Abnormal if indoor control p.c. board cannot finish transmitting 30 times consecutively.</p>	<p>① Defective transmitting receiving circuit of indoor control p.c. board</p> <p>② Noise has entered into the transmission wire of remote controller.</p>	<p>①② Put the power off, and on again to check. If abnormality generates again, replace indoor control p.c. board.</p>
E6	<p><b>Indoor/outdoor unit communication error (Signal receiving error)</b></p> <p>① Abnormal if indoor control p.c. board cannot receive any signal normally for six minutes after putting the power on.</p> <p>② Abnormal if indoor control p.c. board cannot receive any signal normally for three minutes.</p> <p>③ Consider the unit abnormal under the following condition: When two or more indoor units are connected to one outdoor unit, indoor control p.c. board cannot receive a signal for three minutes from outdoor control p.c. board, a signal which allows outdoor controller board to transmit signals.</p>	<p>① Contact failure, short circuit or, mis-wiring (converse wiring) of indoor/outdoor unit connecting wire</p> <p>② Defective transmitting receiving circuit of indoor control p.c. board</p> <p>③ Defective transmitting receiving circuit of indoor control p.c. board</p> <p>④ Noise has entered into indoor/outdoor unit connecting wire.</p>	<p>Check LED display on outdoor control p.c. board. Refer to EA-EC item (on outdoor unit section) if LED displays EA-EC.</p> <p>① Check disconnection or looseness of indoor/outdoor unit connecting wire of indoor unit or outdoor unit. Check all the units in case of twin triple indoor unit system.</p> <p>②-④ Put the power off, and on again to check. If abnormality generates again, replace indoor control p.c. board or outdoor control p.c. board.</p> <p>※ Other indoor control p.c. board may have defect in case of twin triple indoor unit system.</p>
E7	<p><b>Indoor/outdoor unit communication error (Transmitting error)</b></p> <p>Abnormal if "1" receiving is detected 30 times continuously though indoor control p.c. board has transmitted "0".</p>	<p>① Defective transmitting receiving circuit of indoor control p.c. board</p> <p>② Noise has entered into power supply.</p> <p>③ Noise has entered into outdoor control wire.</p>	<p>①-③ Put the power off, and on again to check. If abnormality generates again, replace indoor control p.c. board.</p>

### 9-3. TROUBLE-SHOOTING BY INFERIOR PHENOMENA

Note: Refer to the manual of outdoor unit for the detail of remote controller.

Phenomena	Factor	Countermeasure
(1) LED2 on indoor control p.c. board is off.	<ul style="list-style-type: none"> <li>When LED1 on indoor control p.c. board is also off.</li> <li>Power supply of 220~240V is not supplied to outdoor unit.</li> <li>Defective outdoor control p.c. board</li> <li>Power supply of 220~240V is not supplied to indoor unit.</li> <li>Defective indoor power board</li> <li>Defective indoor control p.c. board</li> </ul>	<ul style="list-style-type: none"> <li>Check the voltage of outdoor power supply terminal block (L, N)           <ul style="list-style-type: none"> <li>When AC 220~240V is not detected. Check the power wiring to outdoor unit and the breaker.</li> <li>When AC 220~240V is detected. —Check ② (below).</li> </ul> </li> <li>Check the voltage between outdoor terminal block S1 and S2.           <ul style="list-style-type: none"> <li>When AC 220~240V is not detected. Check the fuse on outdoor control p.c. board (10A). Check the wiring connection.</li> <li>When AC 220~240V is detected. —Check ③ (below).</li> </ul> </li> <li>Check the voltage between indoor terminal block S1 and S2.           <ul style="list-style-type: none"> <li>When AC 220~240V is not detected. Check indoor/outdoor unit connecting wire for mis-wiring.</li> <li>When AC 220~240V is detected. —Check ④ (below).</li> </ul> </li> <li>Check voltage output from CN2S on indoor power board (DC14V).           <ul style="list-style-type: none"> <li>When no voltage is output. Check the fuse on power board. Check the wiring connection.</li> <li>When output voltage is between 12.6V and 16V. —Check ⑤ (below).</li> </ul> </li> <li>Check the wiring connection between indoor control p.c. board and power board.           <ul style="list-style-type: none"> <li>If no problems are found, indoor control p.c. board is defective.</li> </ul> </li> </ul>
(2) LED2 on indoor control p.c. board is blinking.	<ul style="list-style-type: none"> <li>When LED1 on indoor control p.c. board is also blinking. Connection failure of indoor/outdoor unit connecting wire</li> <li>When LED1 is lit. Mis-wiring of remote controller wires Under twin triple indoor unit system, 2 or more indoor units are wired together.</li> <li>Refrigerant address for outdoor unit is wrong or not set. Under grouping control system, there are some units whose refrigerant address is 0.</li> <li>Short-circuit of remote controller wires</li> <li>Defective remote controller</li> </ul>	<ul style="list-style-type: none"> <li>Reconfirm the setting of refrigerant address for outdoor unit           <ul style="list-style-type: none"> <li>Set the refrigerant address to "0". (For grouping control system under which 2 or more outdoor units are connected, set one of the units to "0".)</li> <li>Set refrigerant address using SW1 (3-6) on outdoor control p.c. board.</li> </ul> </li> <li>Check indoor/outdoor unit connecting wire for connection failure. Check the connection of remote controller wires in case of twin triple indoor unit system. When 2 or more indoor units are wired in one refrigerant system, connect remote controller wires to one of those units.</li> <li>Check the setting of refrigerant address in case of grouping control system. If there are some units whose refrigerant addresses are 0 in one group, set one of the units to 0 using SW1 (3-6) on outdoor control p.c. board.</li> <li>Remove remote controller wires and check LED2 on indoor control p.c. board.           <ul style="list-style-type: none"> <li>When LED2 is blinking, check the short-circuit of remote controller wires.</li> <li>When LED2 is lit, connect remote controller wires again and: if LED2 is blinking, remote controller is defective; if LED2 is lit, connection failure of remote controller terminal block etc. has returned to normal.</li> </ul> </li> </ul>

## 9-4. EMERGENCY OPERATION

### 9-4-1. When wired remote controller or indoor unit micro computer has trouble

1. If there is not any other item wrong when the trouble occurs, emergency operation starts when the indoor control board switch (SWE) is set to ON.

During the emergency operation the indoor unit is as follows;

- (1) Indoor fan high speed operation    (2) Drain-up machine operation

2. When emergency operating for COOLING or HEATING, setting of the switch (SWE) in the indoor control p.c.board and outdoor unit emergency operation are necessary.

3. Check items and notices as the emergency operation

- (1) Emergency operation cannot be used as follows;

- When the outdoor unit has something wrong.
- When the indoor fan has something wrong.
- When drain over flow protected operation is detected during self-diagnosis. (Error code : P5)

- (2) Emergency operation will be serial operation by the power supply ON/OFF.

ON/OFF or temperature, etc. adjustment is not operated by the remote controller.

- (3) Do not operate for a long time as cold air is blown when the outdoor unit starts defrosting operation during heating emergency operation.

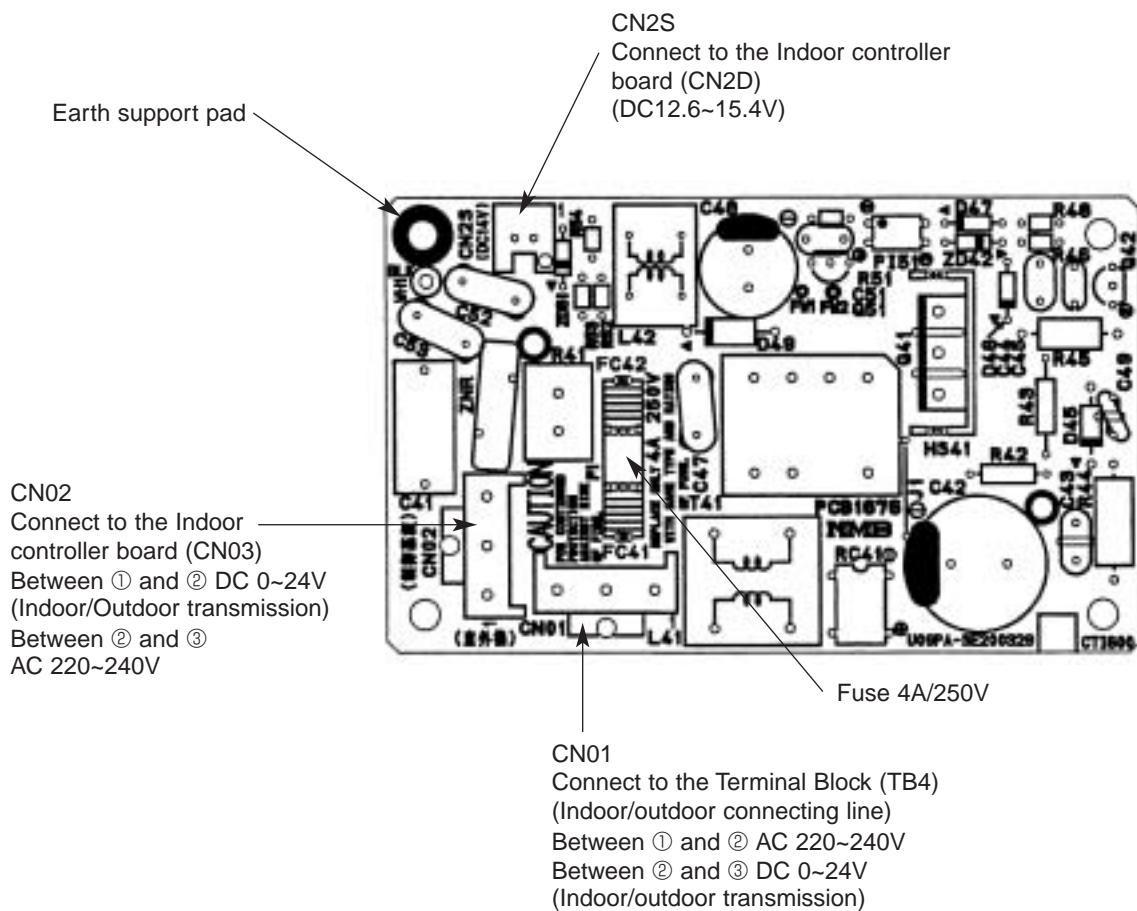
- (4) Cool emergency operation must be kept within 10 hours running at most, as it may cause heat exchanger frosting in the indoor unit.

- (5) After completing the emergency operation, return the switch setting, etc. in former state.

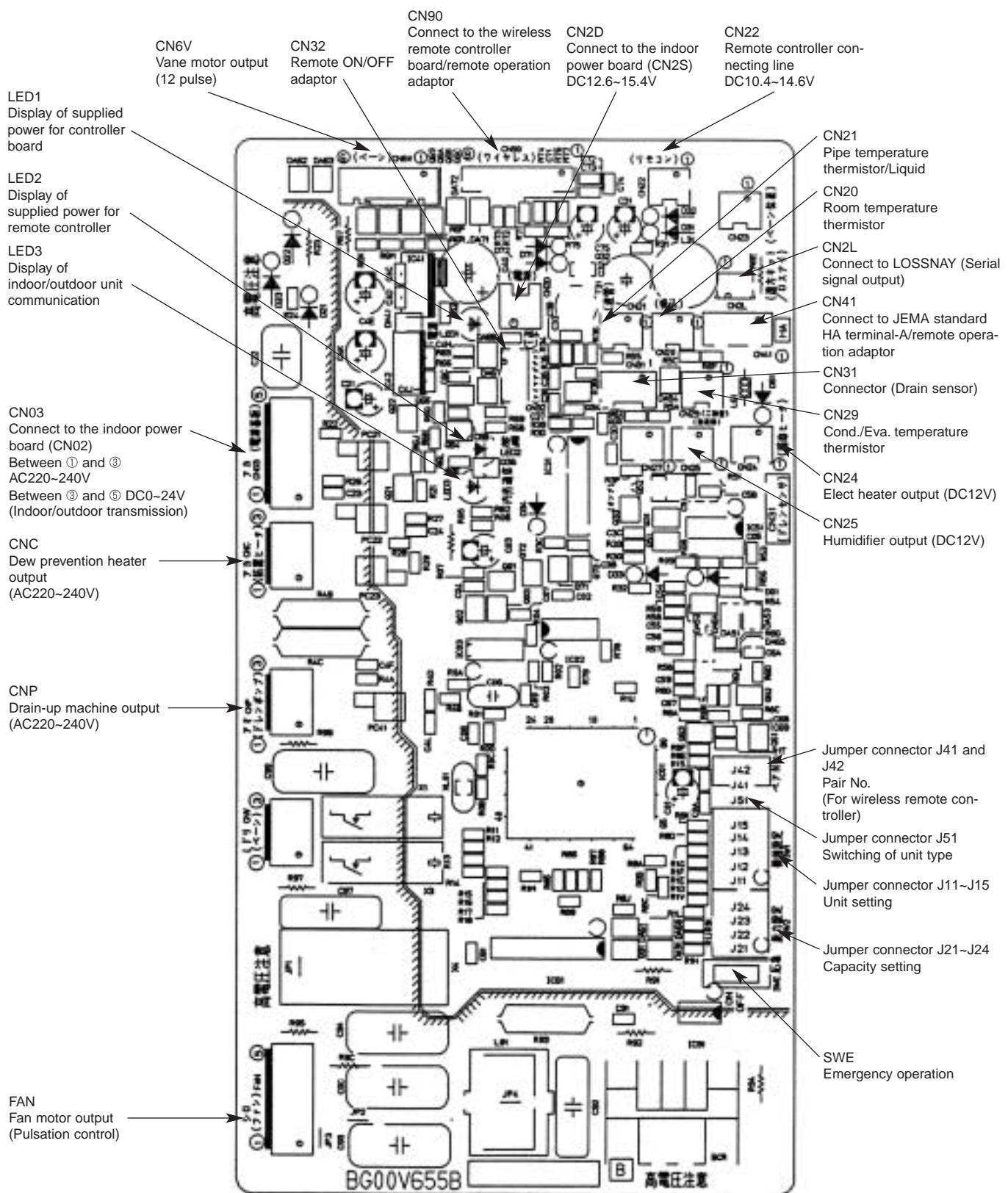
- (6) Since vane does not work at emergency operation, position the vane manually and slowly.

## 9-5. TEST POINT DIAGRAM

### 9-5-1. Power board



## 9-5-2. Controller board



## 9-6. FUNCTIONS OF JUMPER WIRE

Each function is controlled by the jumper wire on control p.c. board. For service parts, J11- J15 and J21-J24, DIP switches (SW1 and SW2) are equipped with jumper wire.

(Marks in the table below)    Jumper wire (○ : Short × : Open)  
DIP switch (○ : ON × : OFF)

Jumper wire	Functions	Open/short of jumper wire	Remarks																																								
J11~J15 (SW1)	Model settings	Models : PEAD-RP1.6~6 <table border="1"> <thead> <tr> <th></th> <th>J11</th> <th>J12</th> <th>J13</th> <th>J14</th> <th>J15</th> </tr> </thead> <tbody> <tr> <td>Heater-less</td> <td>×</td> <td>○</td> <td>×</td> <td>×</td> <td>×</td> </tr> </tbody> </table>		J11	J12	J13	J14	J15	Heater-less	×	○	×	×	×																													
	J11	J12	J13	J14	J15																																						
Heater-less	×	○	×	×	×																																						
J21~J24 (SW2)	Capacity settings	<table border="1"> <thead> <tr> <th>Models</th> <th>J21</th> <th>J22</th> <th>J23</th> <th>J24</th> </tr> </thead> <tbody> <tr> <td>RP1.6</td> <td>○</td> <td>○</td> <td>×</td> <td>×</td> </tr> <tr> <td>RP2</td> <td>○</td> <td>×</td> <td>○</td> <td>×</td> </tr> <tr> <td>RP2.5</td> <td>○</td> <td>○</td> <td>○</td> <td>×</td> </tr> <tr> <td>RP3</td> <td>○</td> <td>×</td> <td>×</td> <td>○</td> </tr> <tr> <td>RP4</td> <td>×</td> <td>×</td> <td>○</td> <td>○</td> </tr> <tr> <td>RP5</td> <td>×</td> <td>○</td> <td>○</td> <td>○</td> </tr> <tr> <td>RP6</td> <td>○</td> <td>○</td> <td>○</td> <td>○</td> </tr> </tbody> </table>	Models	J21	J22	J23	J24	RP1.6	○	○	×	×	RP2	○	×	○	×	RP2.5	○	○	○	×	RP3	○	×	×	○	RP4	×	×	○	○	RP5	×	○	○	○	RP6	○	○	○	○	
Models	J21	J22	J23	J24																																							
RP1.6	○	○	×	×																																							
RP2	○	×	○	×																																							
RP2.5	○	○	○	×																																							
RP3	○	×	×	○																																							
RP4	×	×	○	○																																							
RP5	×	○	○	○																																							
RP6	○	○	○	○																																							

## 9-7. HOW TO CHECK THE PARTS

Parts name	Check points				
Room temperature thermistor (TH1) Pipe temperature thermistor (TH2) Condenser/Evaporator temperature thermistor (TH5)	Disconnect the connector then measure the resistance using a tester. (Surrounding temperature 10°C ~30°C) <table border="1"> <thead> <tr> <th>Normal</th> <th>Abnormal</th> </tr> </thead> <tbody> <tr> <td>4.3kΩ~9.6kΩ</td> <td>Open or short</td> </tr> </tbody> </table> (Refer to the thermistor)	Normal	Abnormal	4.3kΩ~9.6kΩ	Open or short
Normal	Abnormal				
4.3kΩ~9.6kΩ	Open or short				

<Thermistor Characteristic graph>

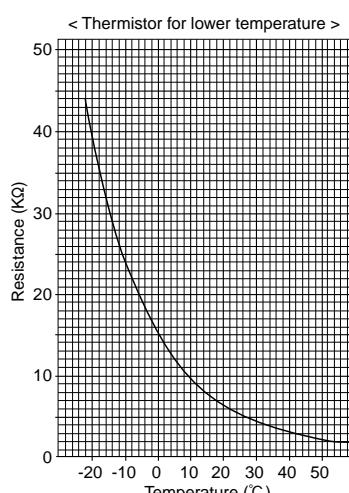
Thermistor for lower temperature

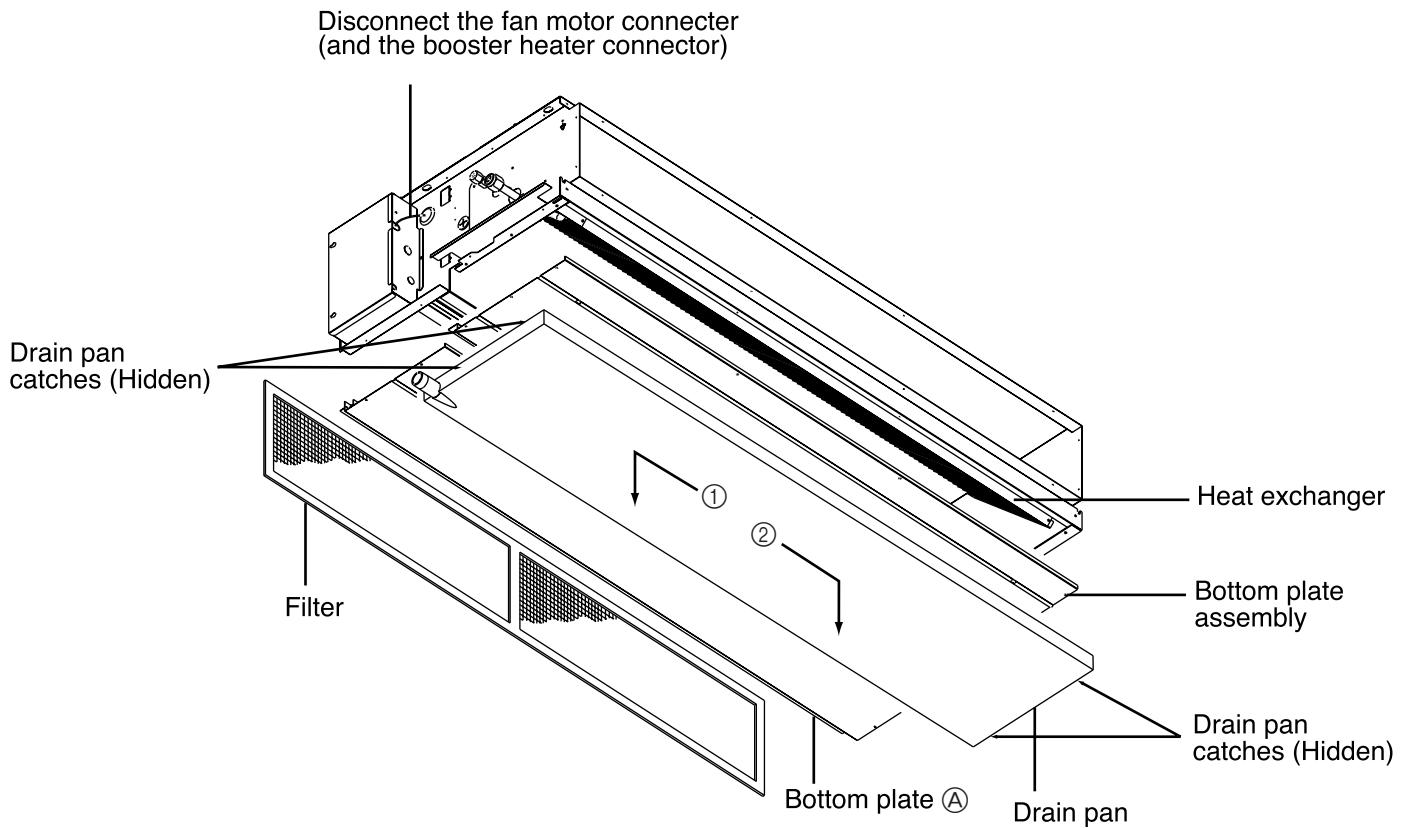
Room temperature thermistor(TH1)  
 Pipe temperature thermistor(TH2)  
 Condenser/evaporator temperature thermistor(TH5)

Thermistor  $R_0=15\text{k}\Omega \pm 3\%$   
 Fixed number of  $B=3480\text{k}\Omega \pm 2\%$

$$R_t = 15 \exp \left\{ 3480 \left( \frac{1}{273+t} - \frac{1}{273} \right) \right\}$$

0°C	15kΩ
10°C	9.6kΩ
20°C	6.3kΩ
25°C	5.2kΩ
30°C	4.3kΩ
40°C	3.0kΩ

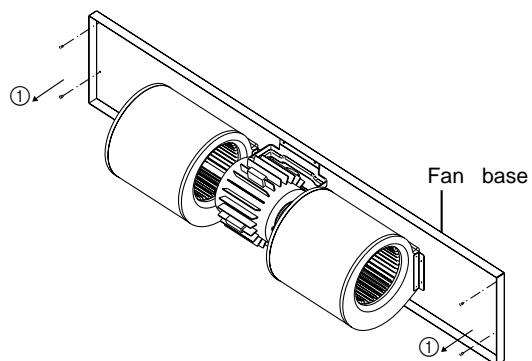


**Figure1.**

### 1. Removing the fan motor

1. Remove the 9 screws that fix the bottom plate A, and remove it.
2. Removing the drain pan as follows:
  - (1) Remove the screw that fix the drain pan.
  - (2) Slide the drain pan in the direction ①, Figure1 and unhook the drain pan catch near the drain pipe.
  - (3) Slide the drain pan in the direction ②, Figure1 and unhook the 2 catches on the other side of the drain pipe.
3. Remove the 8 screws that fix the bottom plate assembly, and remove it.
4. Disconnect the fan motor connector from the controller box.

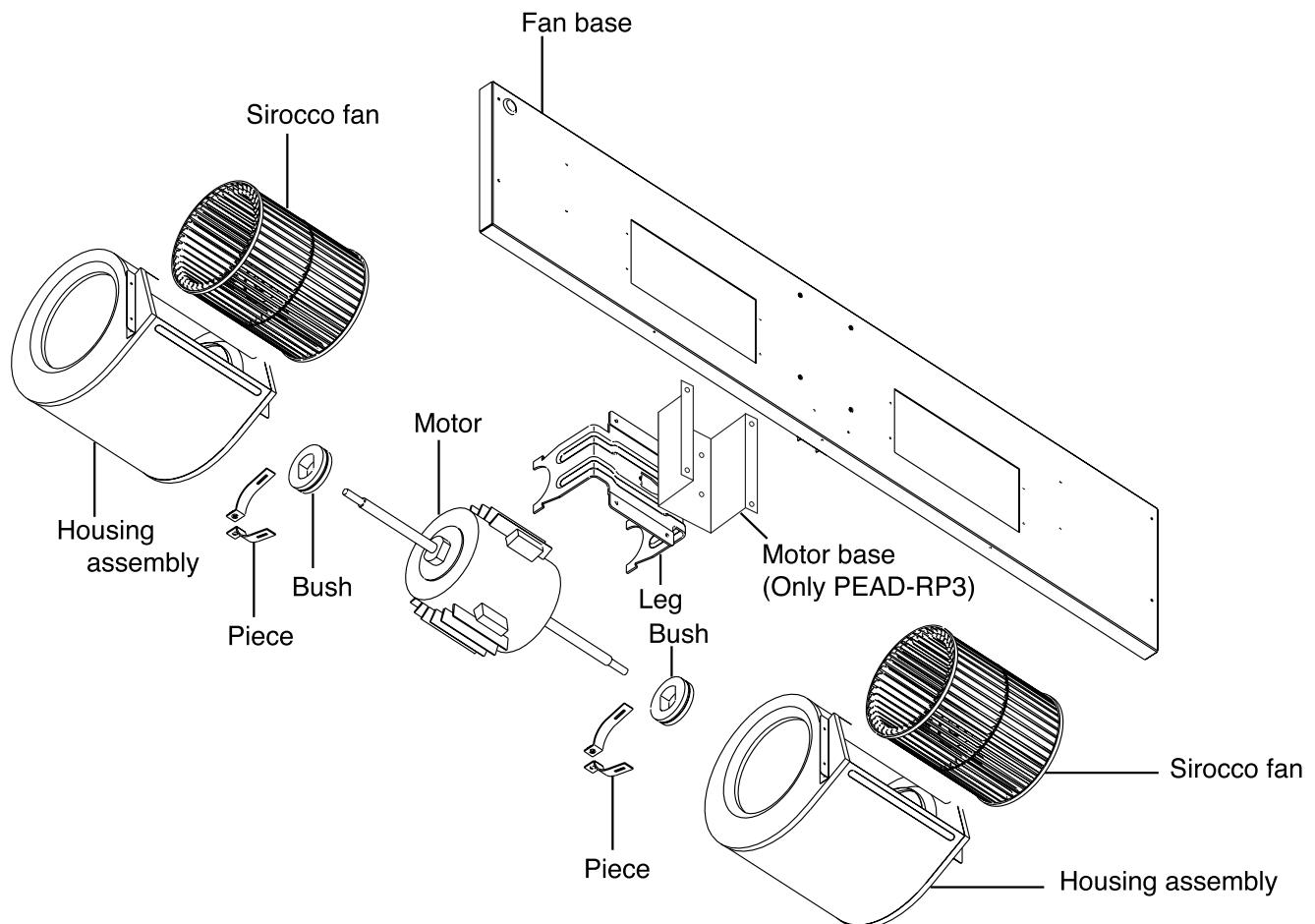
5. Remove the fan base plate as follow:

**Figure2.**

- (1) Remove the 4 screws①
- (2) Slide down the fan base plate to remove.

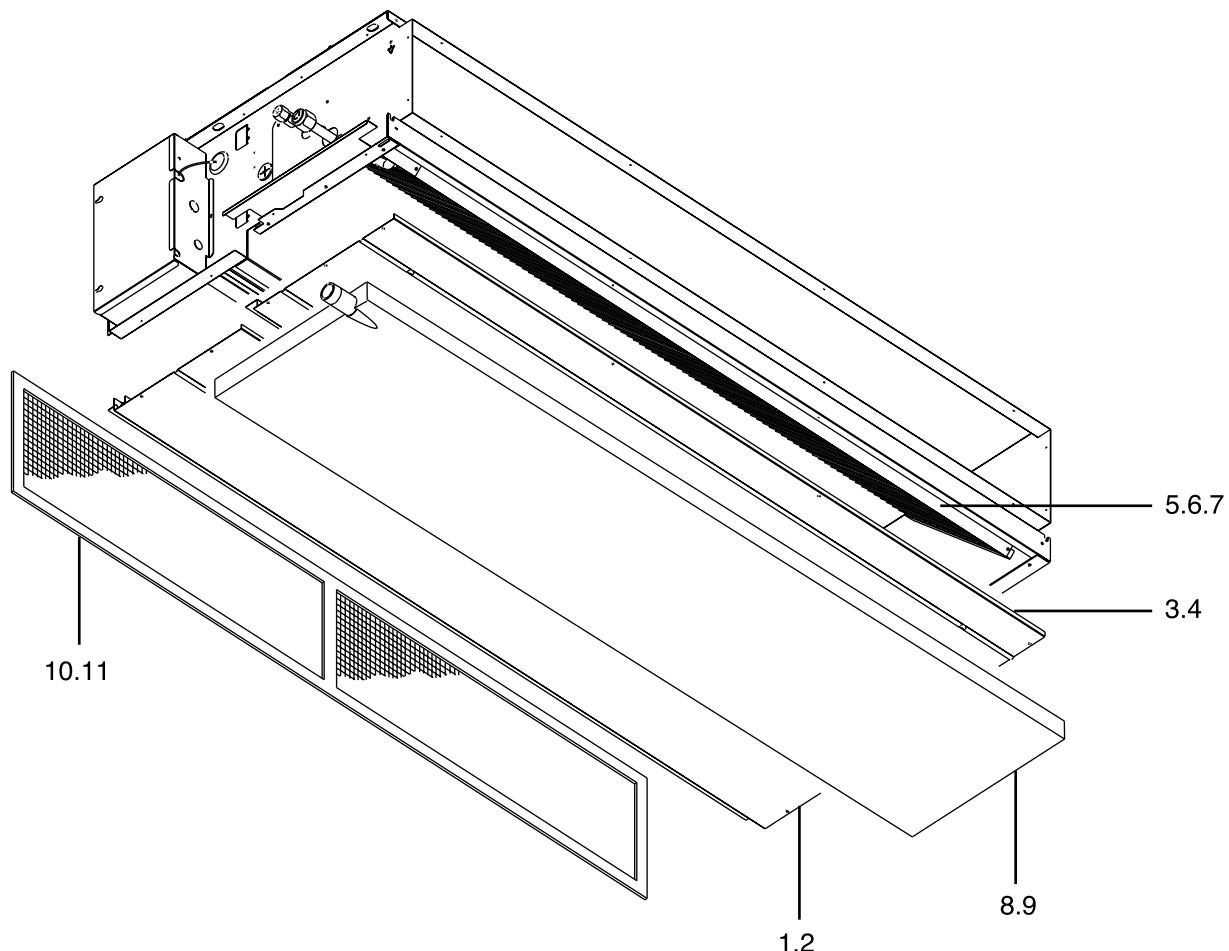
6. Remove the sirocco fan setting screw and the motor fixture setting screw to remove the motor fixture.  
Remove the other motor fixture as well, and then remove the fan motor. (Figure 3)

**Figure3.**



PEAD-RP1.6EA, PEAD-RP2EA, PEAD-RP2.5EA,

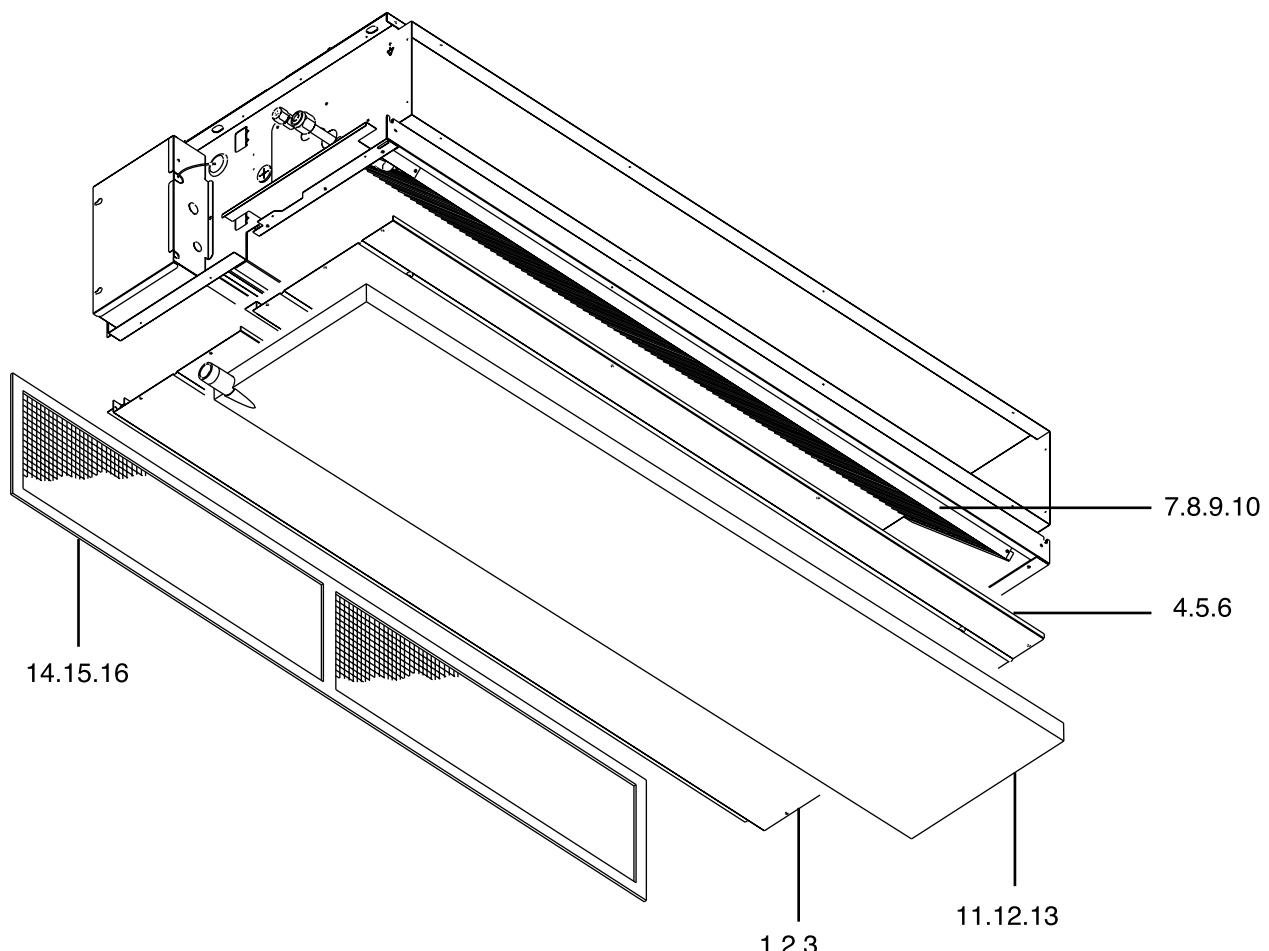
### EXTERNAL PARTS



No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-RP1.6EA	PEAD-RP2EA	PEAD-RP2.5EA		
1	S70 031 669	Bottom plate 1	W638939Z04	1	1			
2	S70 011 669	Bottom plate 1	W638917Z04			1		
3	S70 081 669	Bottom plate 2 ass'y	W638940G03	1	1			
4	S70 091 669	Bottom plate 2 ass'y	W638918G03			1		
5	S70 R20 480	H.EX.General ass'y	W268527G03	1				
6	S70 R35 480	H.EX.General ass'y	W268527G04		1			
7	S70 R22 480	H.EX.General ass'y	W268527G05			1		
8	S70 011 529	Drain pan ass'y	W638942G01	1	1			
9	S70 021 529	Drain pan ass'y	W638920G01			1		
10	S70 021 500	Filter	W645496G02	1	1			
11	S70 031 501	Filter	W645496G03			1		

**PEAD-RP3EA<sub>1</sub>, PEAD-RP4EA<sub>1</sub>,  
PEAD-RP5EA<sub>1</sub>, PEAD-RP6EA<sub>1</sub>**

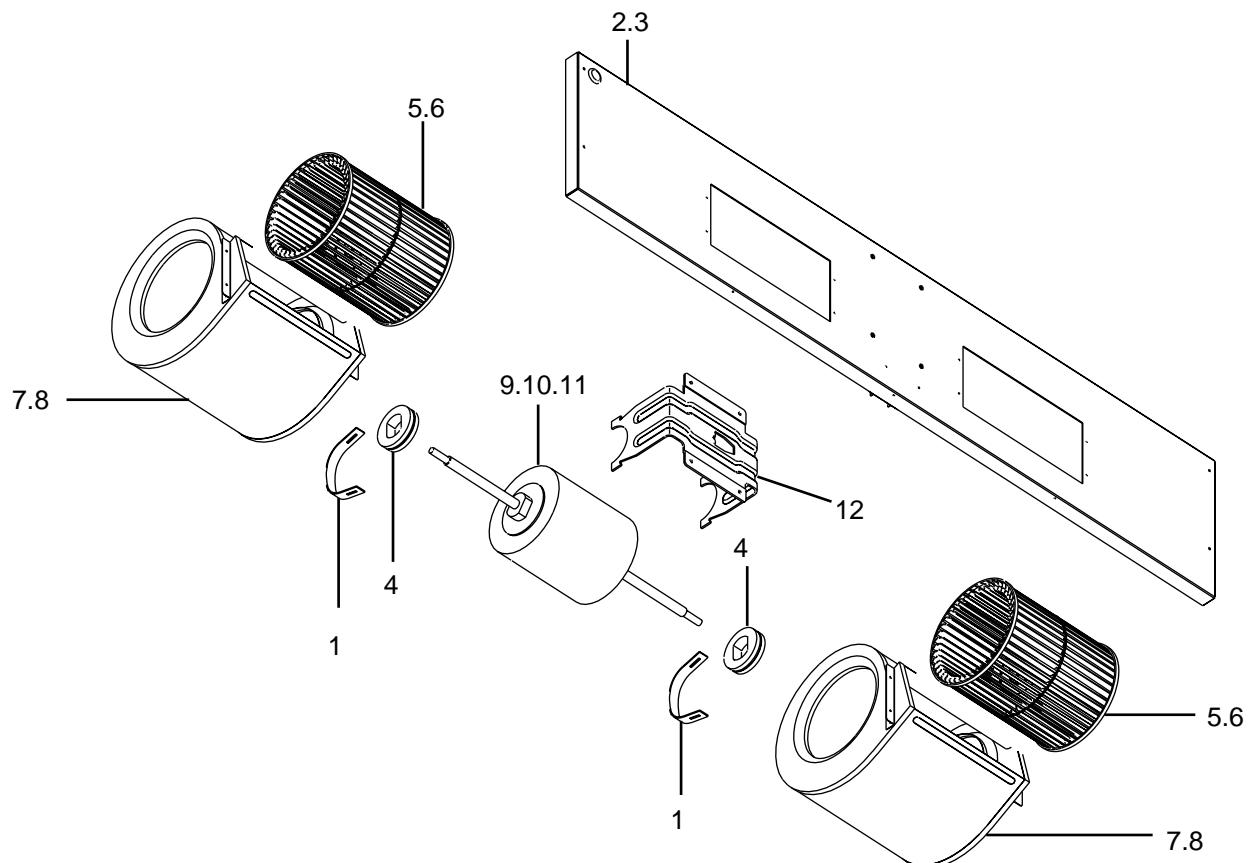
### EXTERNAL PARTS



No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-RP3EA <sub>1</sub>	PEAD-RP4EA <sub>1</sub>	PEAD-RP5EA <sub>1</sub>	PEAD-RP6EA <sub>1</sub>	
1	S70 041 669	Bottom plate 1	W634050Z01	1				
2	S70 042 669	Bottom plate 1	W634028Z01		1	1		
3	S70 040 669	Bottom plate 1	W631101Z04					1
4	S70 051 669	Bottom plate 2 ass'y	W634052G01	1				
5	S70 052 669	Bottom plate 2 ass'y	W634030G01		1	1		
6	S70 050 669	Bottom plate 2 ass'y	W631188G02					1
7	S70 032 480	H.EX.General ass'y	W268528G01	1				
8	S70 R36 480	H.EX.General ass'y	W268528G04		1			
9	S70 R37 480	H.EX.General ass'y	W268528G05			1		
10	S70 R38 480	H.EX.General ass'y	W268529G02					1
11	S70 050 529	Drain pan ass'y	W634056G01	1				
12	S70 060 529	Drain pan ass'y	W634034G01		1	1		
13	S70 040 529	Drain pan ass'y	W631186G01					1
14	S70 050 500	Filter	W645497G01	1				
15	S70 040 500	Filter	W645497G02		1	1		
16	S70 010 500	Filter	W645497G03					1

**PEAD-RP1.6EA, PEAD-RP2EA, PEAD-RP2.5EA,**

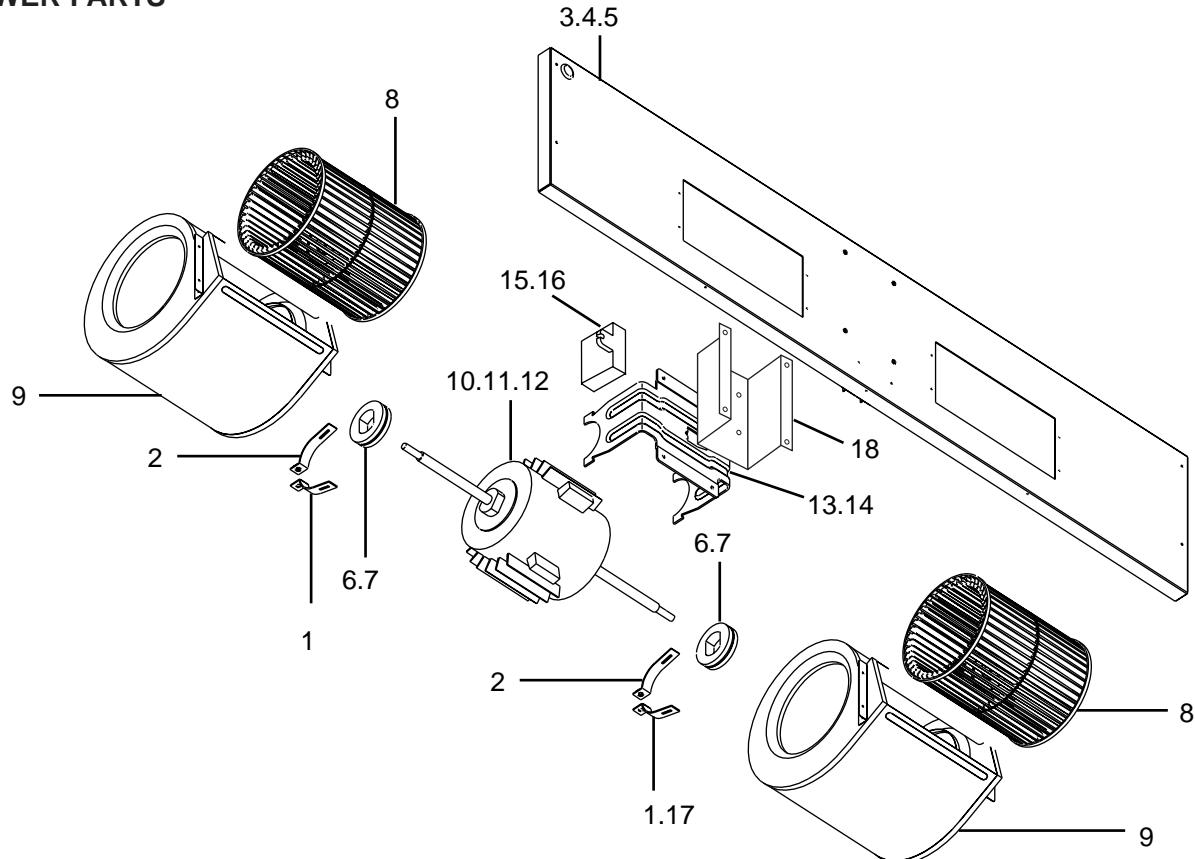
**BLOWER PARTS**



No.	Part No.	Part Name	Drawing No.	Qt'y/set				
				PEAD-RP1.6EA	PEAD-RP2EA	PEAD-RP2.5EA		
1	S70 652 131	Attachment	W353715H01	2	2	2		
2	S70 051 677	Fan base ass'y	W638932G03	1	1			
3	S70 061 677	Fan base ass'y	W638905G03			1		
4	S70 922 105	Bush	W818836H01	2	2	2		
5	S70 A88 114	Sirocco fan	W122296G02	2	2			
6	S70 A89 114	Sirocco fan	W122297G02			2		
7	S70 989 110	Housing ass'y	W638949G03	2	2			
8	S70 985 110	Housing ass'y	W638949G04			2		
9	S70 Y57 220	Motor	P714315X02	1				<MF>
10	S70 Y58 220	Motor	P714316X02		1			<MF>
11	S70 Y56 220	Motor	P714774X01			1		<MF>
12	S70 652 130	Motor support	W241060H03	1	1	1		

**PEAD-RP3EA<sub>1</sub>, PEAD-RP4EA<sub>1</sub>,  
PEAD-RP5EA<sub>1</sub>, PEAD-RP6EA<sub>1</sub>**

**BLOWER PARTS**

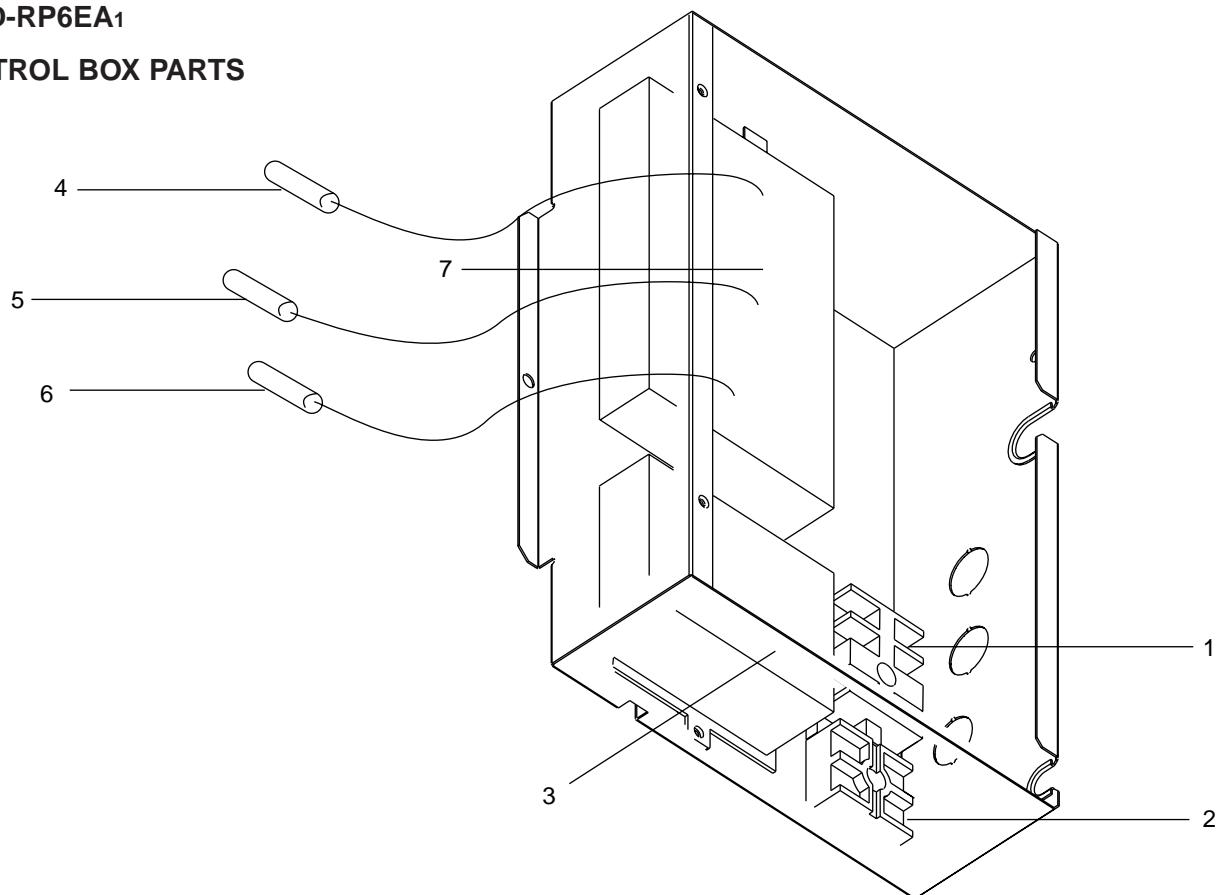


No.	Part No.	Part Name	Drawing No.	Qt'y/set				
				PEAD-RP3EA <sub>1</sub>	PEAD-RP4EA <sub>1</sub>	PEAD-RP5EA <sub>1</sub>	PEAD-RP6EA <sub>1</sub>	
1	S70 508 131	Piece	R02K338H02		2	2	2	
2	S70 508 132	Piece	R02K338G82		2	2	2	with a nut
3	S70 073 677	Fan base ass'y	W634058G02	1				
4	S70 072 677	Fan base ass'y	W634036G02		1	1		
5	S70 070 677	Fan base ass'y	W631187G02				1	
6	S70 766 105	Bush	W491760H02	2				
7	S70 Y01 105	Bush	W860050H02		2	2	2	
8	S70 Y07 114	Sirocco fan	W631126G02	2	2	2	2	20-25L
9	S70 001 110	Housing ass'y	W631120G02	2	2	2	2	
10	S70 Y15 220	Motor	P714661X01	1				<MF> 150W, 1Phase 220~ 240V
11	S70 Y16 220	Motor	P714941X01		1			<MF> 240W, 1Phase 220~ 240V
12	S70 Y17 220	Motor	P714940X01			1	1	<MF> 270W, 1Phase 220~ 240V
13	S70 652 130	Motor support	W241060H03	1				
14	S70 Y08 130	Leg	W631122Z04		1	1	1	
15	S70 010 255	Capacitor 6	P412172X01		1			< C >
16	S70 020 255	Capacitor 16	P412223X01			2	2	< C >
*17	S70 652 131	Attachment	W353715H01	2				
18	S70 090 130	Motor base	W634069Z02	1				

\*: Not illustrated

**PEAD-RP1.6EA, PEAD-RP2EA, PEAD-RP2.5EA,  
PEAD-RP3EA<sub>1</sub>, PEAD-RP4EA<sub>1</sub>, PEAD-RP5EA<sub>1</sub>,  
PEAD-RP6EA<sub>1</sub>**

### CONTROL BOX PARTS

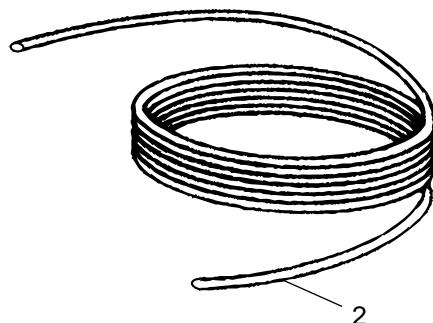
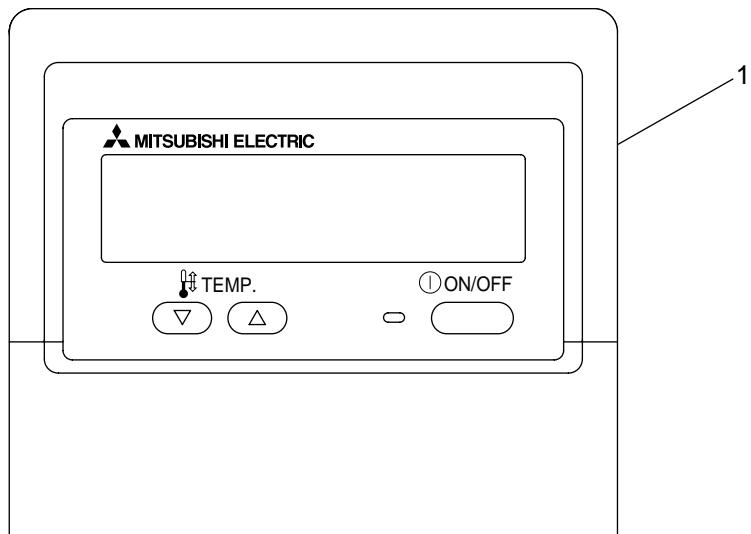


No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-P1.6EA	PEAD-P2EA	PEAD-P2.5EA		
1	S70 979 717	Terminal bed	P436110X01	1	1	1		< TB4 >
2	S70 435 717	Terminal bed	BA73S950H02	1	1	1		< TB5 >
3	S70 E00 313	P.W.B DENGGEN-E	P718898X01	1	1	1		
4	S70 070 202	Thermistor	P425455X01	1	1	1		< TH1 >
5	S70 080 202	Thermistor	P425459X02	1	1	1		< TH2 >
6	S70 090 202	Thermistor	P425458X02	1	1	1		< TH5 >
7	S70 203 310	SPCB	BG00V680BB9	1	1	1		

No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-RP3EA <sub>1</sub>	PEAD-RP4EA <sub>1</sub>	PEAD-RP5EA <sub>1</sub>	PEAD-RP6EA <sub>1</sub>	
1	S70 979 317	Terminal bed	P436110X01	1	1	1	1	< TB4 >
2	S70 435 717	Terminal bed	BA73S950H02	1	1	1	1	< TB5 >
3	S70 E00 313	P.W.B DENGGEN-E	P718898X01	1	1	1	1	
4	S70 070 202	Thermistor	P425455X01	1	1	1	1	< TH1 >
5	S70 080 202	Thermistor	P425459X02	1	1	1	1	< TH2 >
6	S70 090 202	Thermistor	P425458X02	1	1	1	1	< TH5 >
7	S70 203 310	SPCB	BG00V680BB9	1	1	1	1	

**PEAD-RP1.6EA, PEAD-RP2EA, PEAD-RP2.5EA,  
PEAD-RP3EA<sub>1</sub>, PEAD-RP4EA<sub>1</sub>, PEAD-RP5EA<sub>1</sub>,  
PEAD-RP6EA<sub>1</sub>**

## ELECTRICAL PARTS



No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-RP1.6EA	PEAD-RP2EA	PEAD-RP2.5EA		
1	S70 030 713	Remote controller	W267102G60	1	1	1		MA Remo-con
2	S70 030 305	Remote controller cable	W873334G05	1	1	1		10 m

No.	Part No.	Part Name	Drawing No.	Qt'y/set				Spec.
				PEAD-RP3EA <sub>1</sub>	PEAD-RP4EA <sub>1</sub>	PEAD-RP5EA <sub>1</sub>	PEAD-RP6EA <sub>1</sub>	
1	S70 030 713	Remote controller	W267102G60	1	1	1	1	MA Remo-con
2	S70 030 305	Remote controller cable	W873334G05	1	1	1	1	10 m

# 12 OPTIONAL PARTS

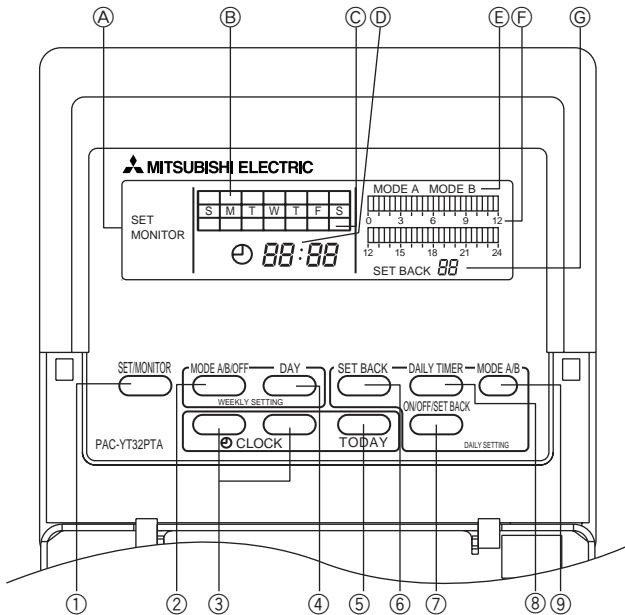
## 1. PROGRAM TIMER

Part No.

PAC-YT32PTA

### 1-1. Names and functions

<PAC-YT32PTA>



Ⓐ SET/MONITOR DISPLAY:

When SET is displayed, clock adjustment, change of day, and daily and weekly timer settings can be performed. When MONITOR is displayed, all switches except SET/MONITOR SW are invalidated. This is normal status.

Ⓑ WEEKLY TIMER SETTING DISPLAY:

Used to select whether the operation pattern set using the PATTERN SETTING can be applied to different days of the week.

Ⓒ CURRENT DAY DISPLAY:

Indicates the current day.

Ⓓ CURRENT TIMEDISSPLAY:

During MONITORstatus, current time is display.

During daily timer setting, a time desire for timer setting is displayed.

Ⓔ OPERATION MODE DISPLAY:

Indicates the operation mode.

Ⓕ DAILY TIMER SETTING DISPLAY:

24 hours is divided into 48 blocks and each block is expressed in 30 minutes.

The block display consists of 3 patterns.

Ⓖ SET BACK DISPLAY

Indicates the set back value.

① SET/MONITOR Button

Using this switch, select "MONITOR" or "SET" Mode.

"MONITOR": Indicates the current timer setting. All switches expect MODE SELECTOR SW are invalidated then. This is the normal status.

"SET": Set to "SET" mode for clock adjustment, change of day and daily and weekly timer settings.

② MODE A/B/OFF Button

Used for setting timer in day of week unit.

③ CLOCK ADJUSTMENT Button

Used for adjustment of the current time.

Push [▲] SW to advance the time. Each time the button is pushed the time advances by 1 minute, pushing continuously advances by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time advances in 10 minute units.

[▼] SW is used for reversing the time. Each time the button is pushed the time reverses by 1 minute, pushing continuously reverses the time by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time reverses in 10 minute units.

④ DAY SETTING Button

Used when setting the day.

⑤ WEEK DAY SETTING Button

Used for week day setting.

Pushing [▶] SW moves the week day light display in order of S→M →T→W→... enabling to set the week day.

⑥ SET BACK SETTING Button

Used for set back setting.

Set back can be done in the range of 1, 2, 4, 6 and 8°C (2, 4, 8, 12 and 16°F).

⑦ ON/OFF/SET BACK Button

Used to specify the time setting pattern.

⑧ DAILY TIMER Button

Used for timer setting in 30 minute units.

⑨ MODE A/B Button

Used to set A Mode or B Mode when specifying the operation time.

## 2. REMOTE SENSOR

Part No.	PAC-SE41TS-E
Applied model	PEAD-RP1.6,2,2.5EA , PEAD-RP3,4,5,6EA1

## 3. REMOTE OPERATION ADAPTER

Part No.	PAC-SF40RM-E
Applied model	PEAD-RP1.6,2,2.5EA , PEAD-RP3,4,5,6EA1

## 4. REMOTE ON/OFF ADAPTER

Part No.	PAC-SE55RA-E
Applied model	PEAD-RP1.6,2,2.5EA , PEAD-RP3,4,5,6EA1

## 5. OPTIONAL MOTOR

The external static pressure of 130Pa allows long ducts to be used more extensively to enable the most convenient positioning of indoor units.

Part No.	PAC-SK005MT-F	PAC-SK004MT-F	PAC-SK003MT-F
Applied model	PEAD-RP3EA1	PEAD-RP4EA1	PEAD-RP5,6EA1

## 6. DRAIN WATER LIFT-UP MECHANISM

This allows more versatility when selecting drain piping layouts.

Part No.	PAC-KE03DM-F
Applied model	PEAD-RP1.6,2,2.5EA , PEAD-RP3,4,5,6EA1







Mr. SLIM™

 **MITSUBISHI ELECTRIC CORPORATION**  
HEAD OFFICE: MITSUBISHI DENKI BLDG., 2-2-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN