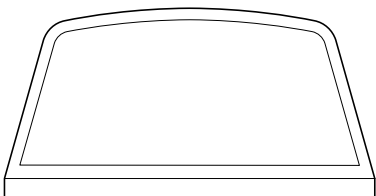
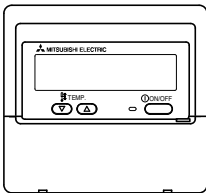
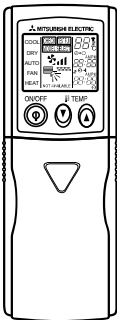
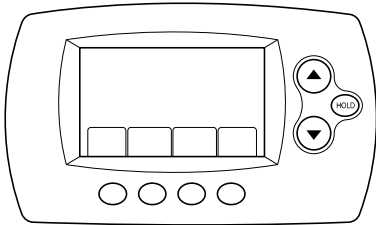


OUTDOOR UNIT SERVICE MANUAL

Model name	Service Ref.	Service Manual No.
PUZ-A18/24/30/36/42NHA4	PUZ-A18/24/30/36/42NHA4	OCH481 OCB481
PUZ-A18/24/30/36/42NHA4-BS	PUZ-A18/24/30/36/42NHA4-BS	
PUY-A12/18/24/30/36/42NHA4	PUY-A12/18/24/30/36/42NHA4	
PUY-A12/18/24/30/36/42NHA4-BS	PUY-A12/18/24/30/36/42NHA4-BS	

■ Remote controller (Optional parts)

Radio frequency interface	Wired remote controller	IR wireless remote controller
		
RF thermostat		
		

2

SAFETY PRECAUTION

2-1. ALWAYS OBSERVE FOR SAFETY

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

2-2. CAUTIONS RELATED TO NEW REFRIGERANT

Caution for units utilising refrigerant R410A

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

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

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

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

Charge refrigerant from liquid phase of gas cylinder.

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

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.

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

Handle tools with care.

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

Do not use a charging cylinder.

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

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

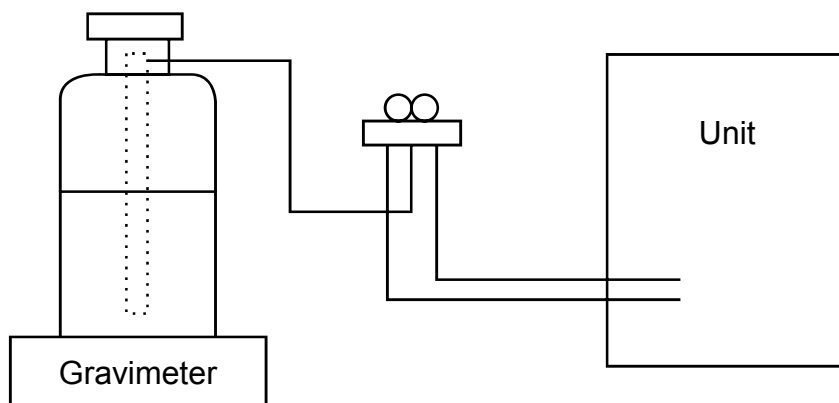
[1] Cautions for service

- (1) Perform service after recovering the refrigerant left in the 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.

[2] Additional refrigerant charge

When charging directly from cylinder

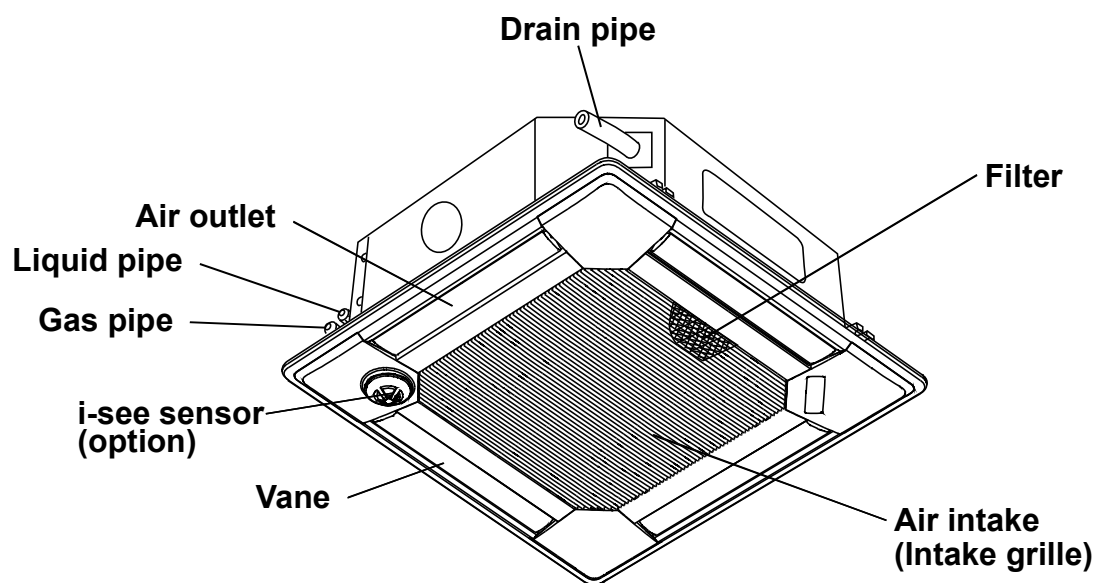
- Check that cylinder for R410A on the market is syphon type.
- Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



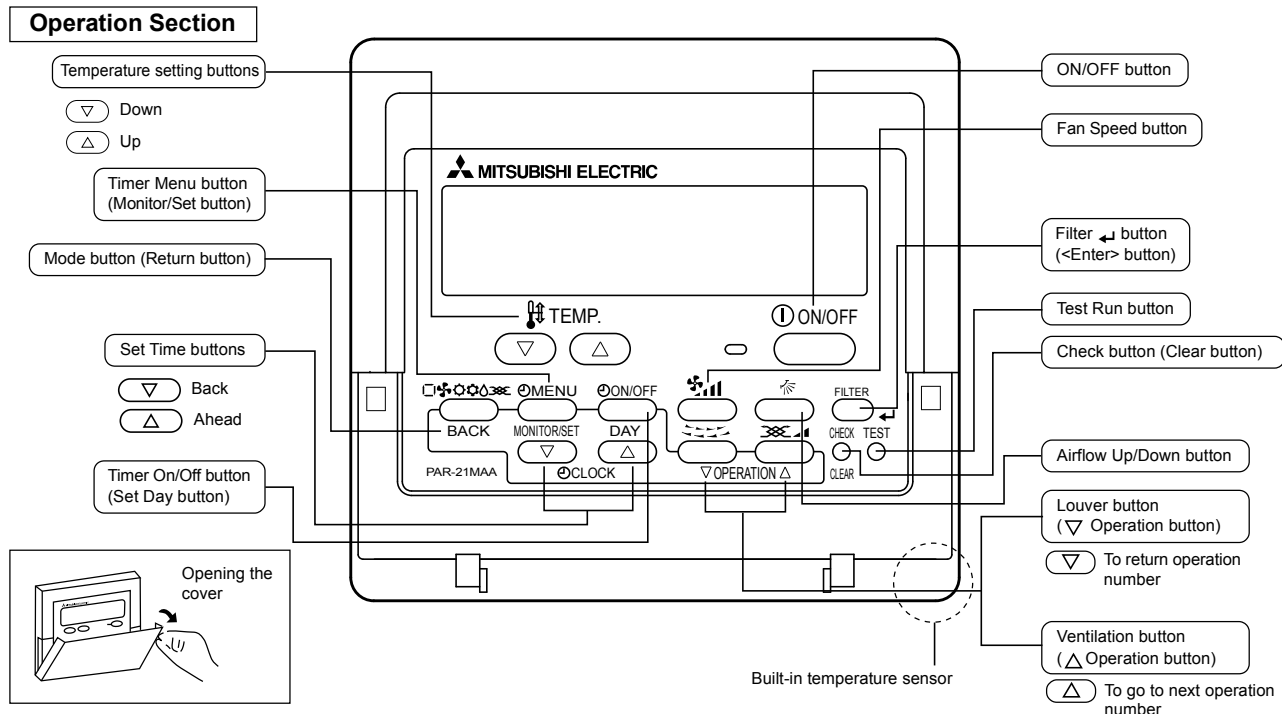
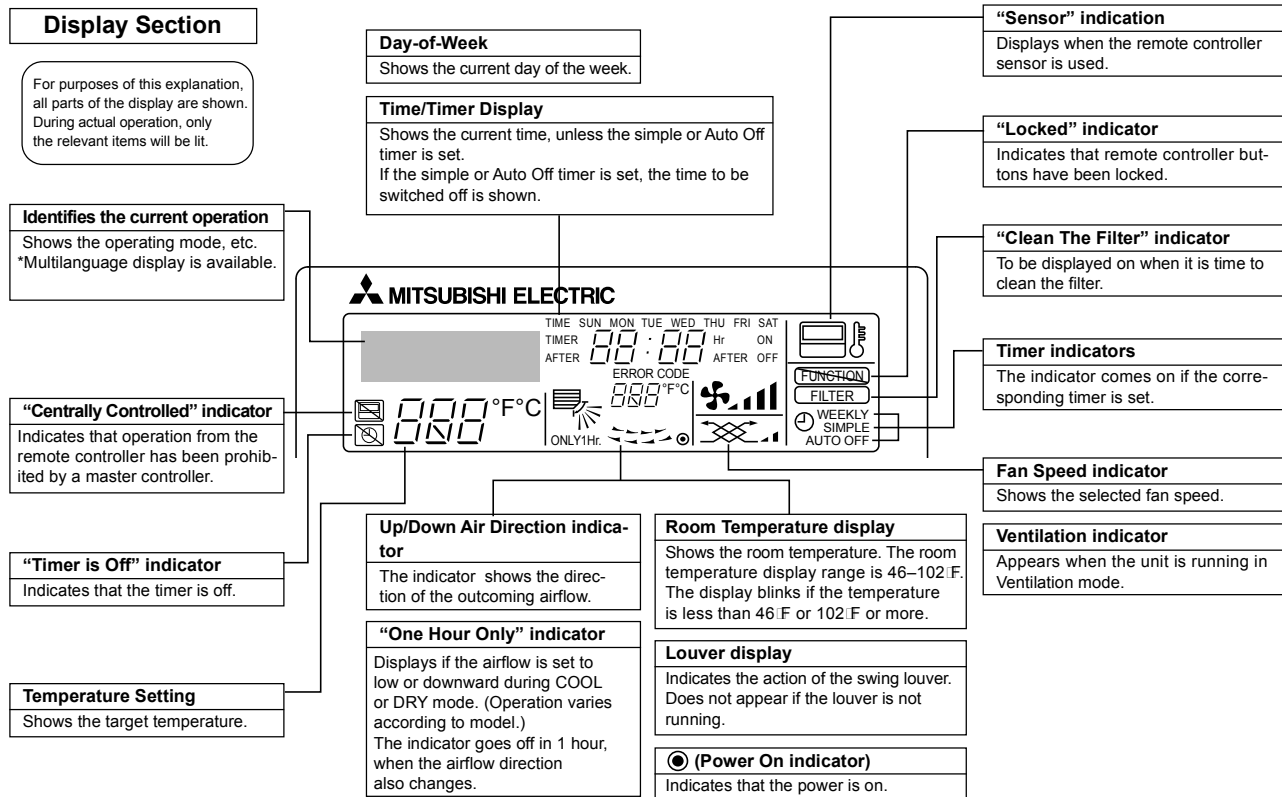
[3] Service tools

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

No.	Tool name	Specifications
①	Gauge manifold	· Only for R410A
		· Use the existing fitting specifications. (UNF1/2)
		· Use high-tension side pressure of 5.3MPa·G or over.
②	Charge hose	· Only for R410A
		· Use pressure performance of 5.09MPa·G or over.
③	Electronic scale	—
④	Gas leak detector	· Use the detector for R134a, R407C or R410A.
⑤	Adaptor for reverse flow check	· Attach on vacuum pump.
⑥	Refrigerant charge base	—
⑦	Refrigerant cylinder	· Only for R410A · Top of cylinder (Pink)
		· Cylinder with syphon
⑧	Refrigerant recovery equipment	—



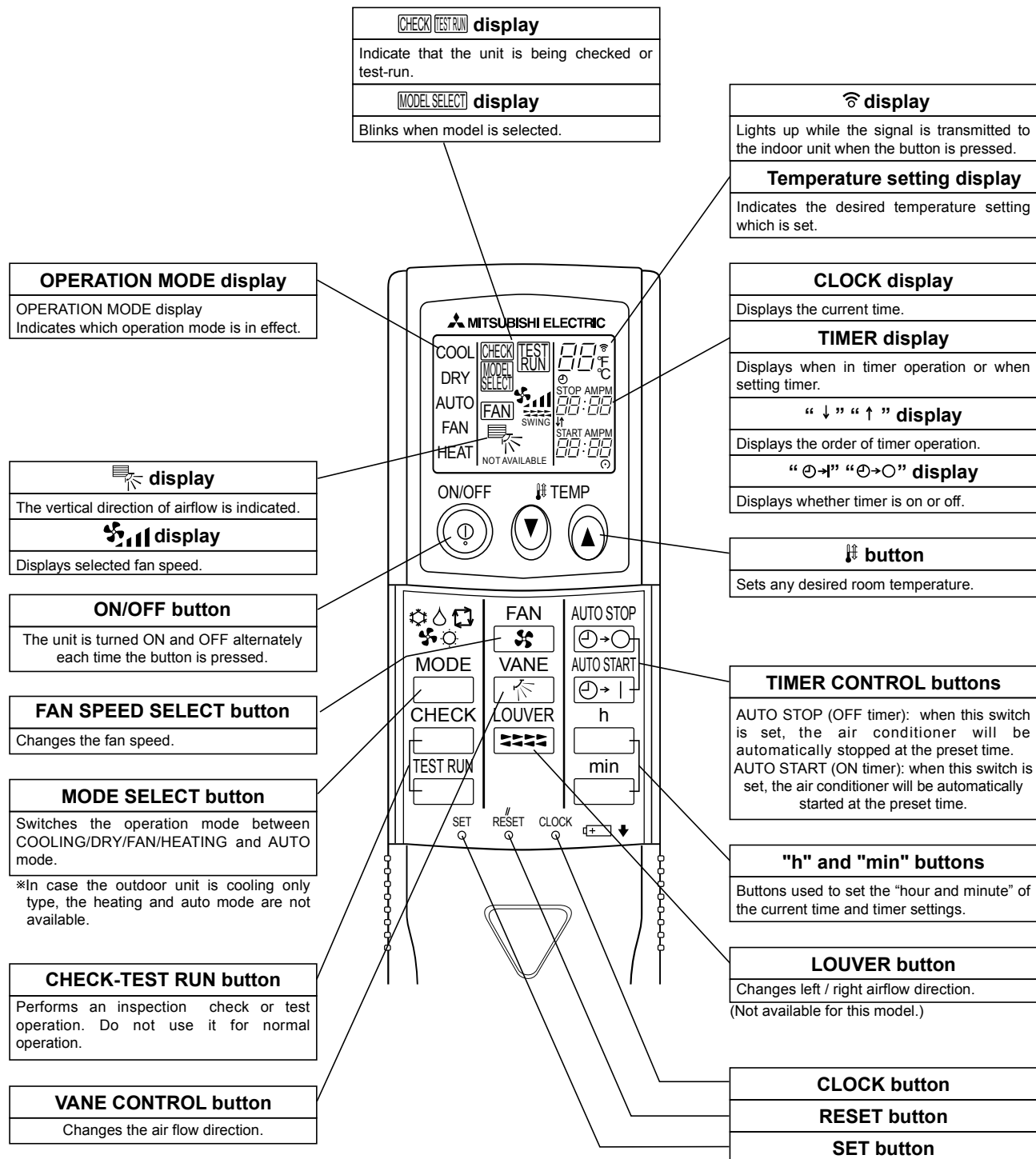
● Wired remote controller (Option)



Note:

- "PLEASE WAIT" message
This message is displayed for approximately 3 minutes when power is supplied to the indoor unit or when the unit is recovering from a power failure.
- "NOT AVAILABLE" message
This message is displayed if an invalid button is pressed (to operate a function that the indoor unit does not have).
If a single remote controller is used to operate multiple indoor units simultaneously that are different types, this message will not be displayed as far as any of the indoor units is equipped with the function.

● IR wireless remote controller (Option)



Service Ref.			PLA-A12BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	1	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.	Turbo fan (direct) × 1	
		Fan motor output	kW	
		Fan motor	F.L.A.	
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	
		External static pressure	Pa(mmAq)	
	Booster heater		kW	
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	
	Field drain pipe O.D.		mm(in.)	
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 258 (10-3/16) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	

Service Ref.			PLA-A18BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	1	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.	Turbo fan (direct) × 1	
		Fan motor output	kW	
		Fan motor	F.L.A.	
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	
		External static pressure	Pa(mmAq)	
	Booster heater		kW	
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	
	Field drain pipe O.D.		mm(in.)	
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 258 (10-3/16) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	

Service Ref.			PLA-A24BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	1	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.	Turbo fan (direct) × 1	
		Fan motor output	kW	
		Fan motor	F.L.A.	
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	
		External static pressure	Pa(mmAq)	
	Booster heater		kW	
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	
	Field drain pipe O.D.		mm(in.)	
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 258 (10-3/16) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	



Service Ref.			PLA-A30BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase,60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	1	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1
		Fan motor output	kW	0.05
		Fan motor	F.L.A.	0.51
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	Dry: 14-16-18-21(490-570-640-740)
				Wet: 13-15-17-20(460-530-600-710)
		External static pressure	Pa(mmAq)	0(direct blow)
	Booster heater		kW	—
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	28-30-32-34
	Field drain pipe O.D.		mm(in.)	32(1-1/4)
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 258 (10-3/16) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	UNIT : 23 (51) PANEL: 6 (13)

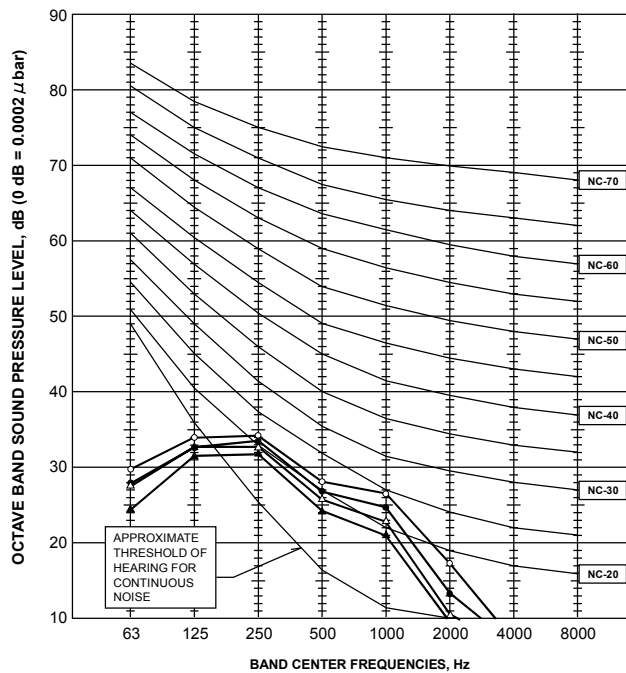
Service Ref.			PLA-A36BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase,60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	2	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1
		Fan motor output	kW	0.12
		Fan motor	F.L.A.	1.00
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	Dry: 20-23-26-30(710-810-920-1060)
				Wet: 19-22-25-29(670-770-880-1030)
		External static pressure	Pa(mmAq)	0(direct blow)
	Booster heater		kW	—
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	32-34-37-40
	Field drain pipe O.D.		mm(in.)	32(1-4)
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 298 (11-3/4) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	UNIT : 25 (55) PANEL : 6 (13)

Service Ref.			PLA-A42BA4	
INDOOR UNIT	Power supply (phase, cycle, voltage)		Single phase,60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	2	
	External finish (Panel)		Munsell 6.4Y 8.9/0.4	
	Heat exchanger		Plate fin coil	
	Fan	Fan (drive) × No.		Turbo fan (direct) × 1
		Fan motor output	kW	0.12
		Fan motor	F.L.A.	1.00
		Airflow (Low-Medium2-Medium1-High)	m³/min(CFM)	Dry: 22-25-28-31(780-880-990-1090)
				Wet: 21-24-27-30(740-850-950-1060)
		External static pressure	Pa(mmAq)	0(direct blow)
	Booster heater		kW	—
	Operation control & Thermostat		Remote controller & built-in	
	Noise level (Low-Medium2-Medium1-High)		dB	34-36-39-41
	Field drain pipe O.D.		mm(in.)	32(1-1/4)
	Dimensions	W	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		D	mm(in.)	UNIT : 840 (33-1/16) PANEL : 950 (37-3/8)
		H	mm(in.)	UNIT : 298 (11-3/4) PANEL : 35 (1-3/8)
	Weight		kg(lbs)	UNIT : 25 (55) PANEL : 6 (13)

NOISE CRITERION CURVES

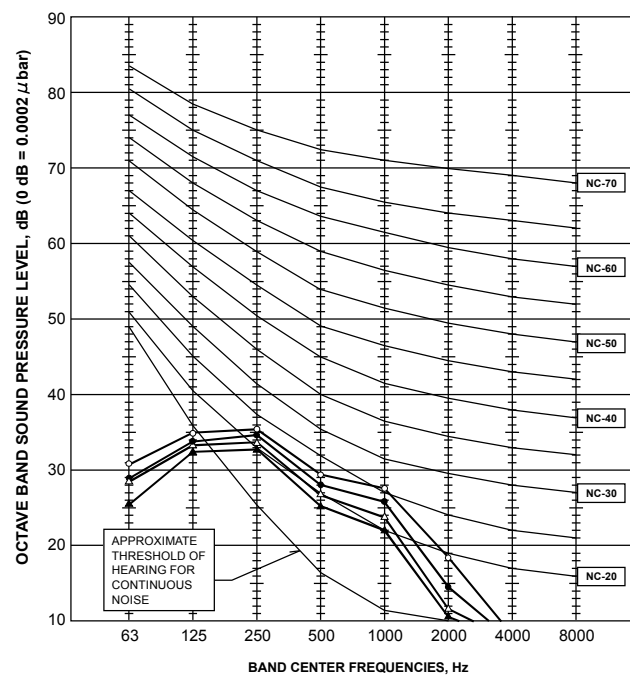
PLA-A12BA4

NOTCH	SPL(dB)	LINE
High	31	○—○
Medium1	29	●—●
Medium2	28	△—△
Low	27	▬—▬



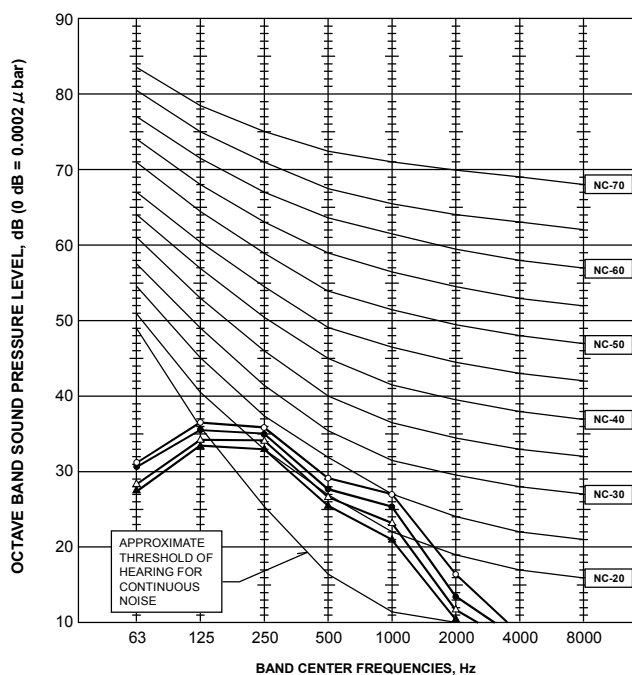
PLA-A18BA4

NOTCH	SPL(dB)	LINE
High	32	○—○
Medium1	31	●—●
Medium2	29	△—△
Low	28	▬—▬



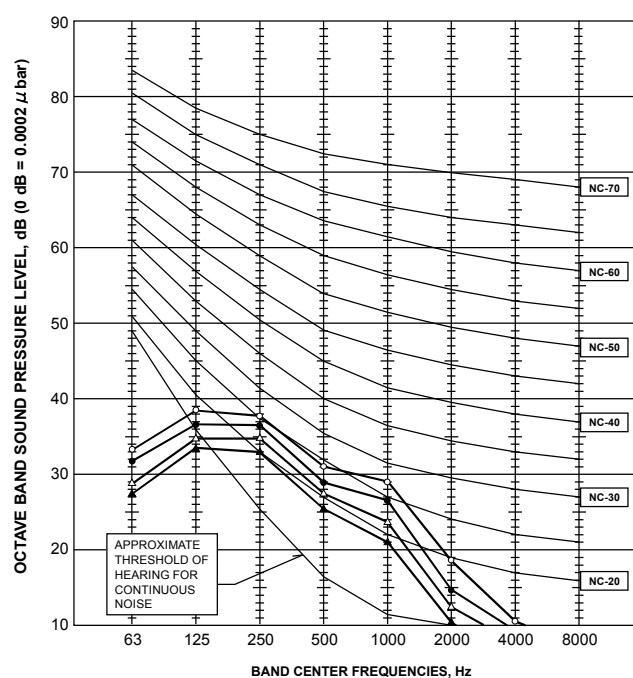
PLA-A24BA4

NOTCH	SPL(dB)	LINE
High	32	○—○
Medium1	31	●—●
Medium2	29	△—△
Low	28	▬—▬



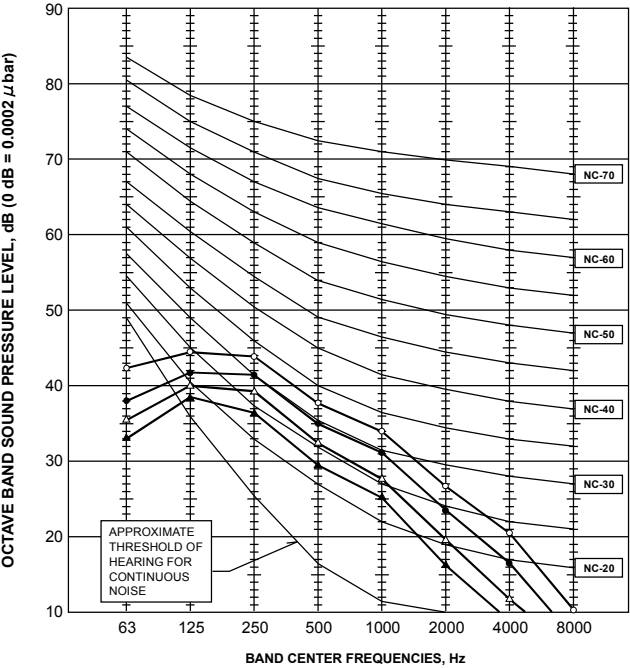
PLA-A30BA4

NOTCH	SPL(dB)	LINE
High	34	○—○
Medium1	32	●—●
Medium2	30	△—△
Low	28	▬—▬



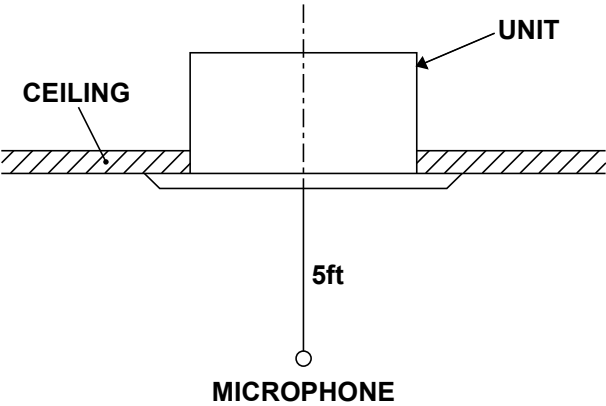
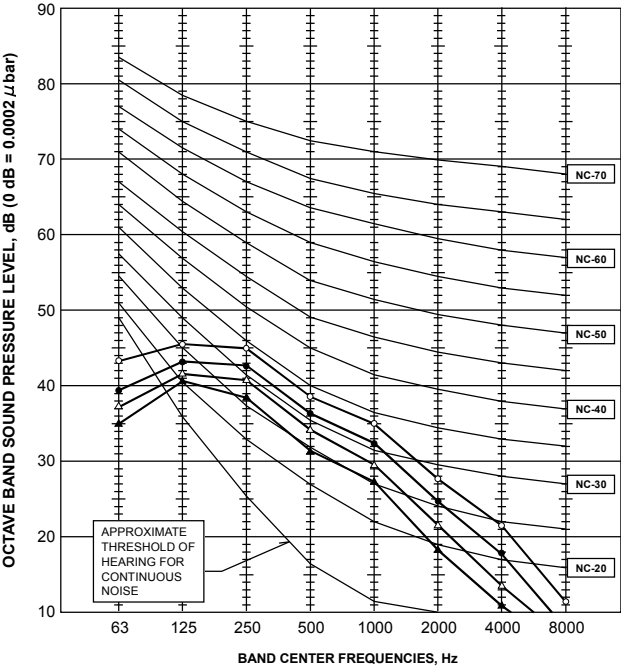
PLA-A36BA4

NOTCH	SPL(dB)	LINE
High	40	
Medium1	37	
Medium2	34	
Low	32	



PLA-A42BA4

NOTCH	SPL(dB)	LINE
High	41	
Medium1	39	
Medium2	36	
Low	34	



INDOOR UNIT

PLA-A12BA4

PLA-A30BA4

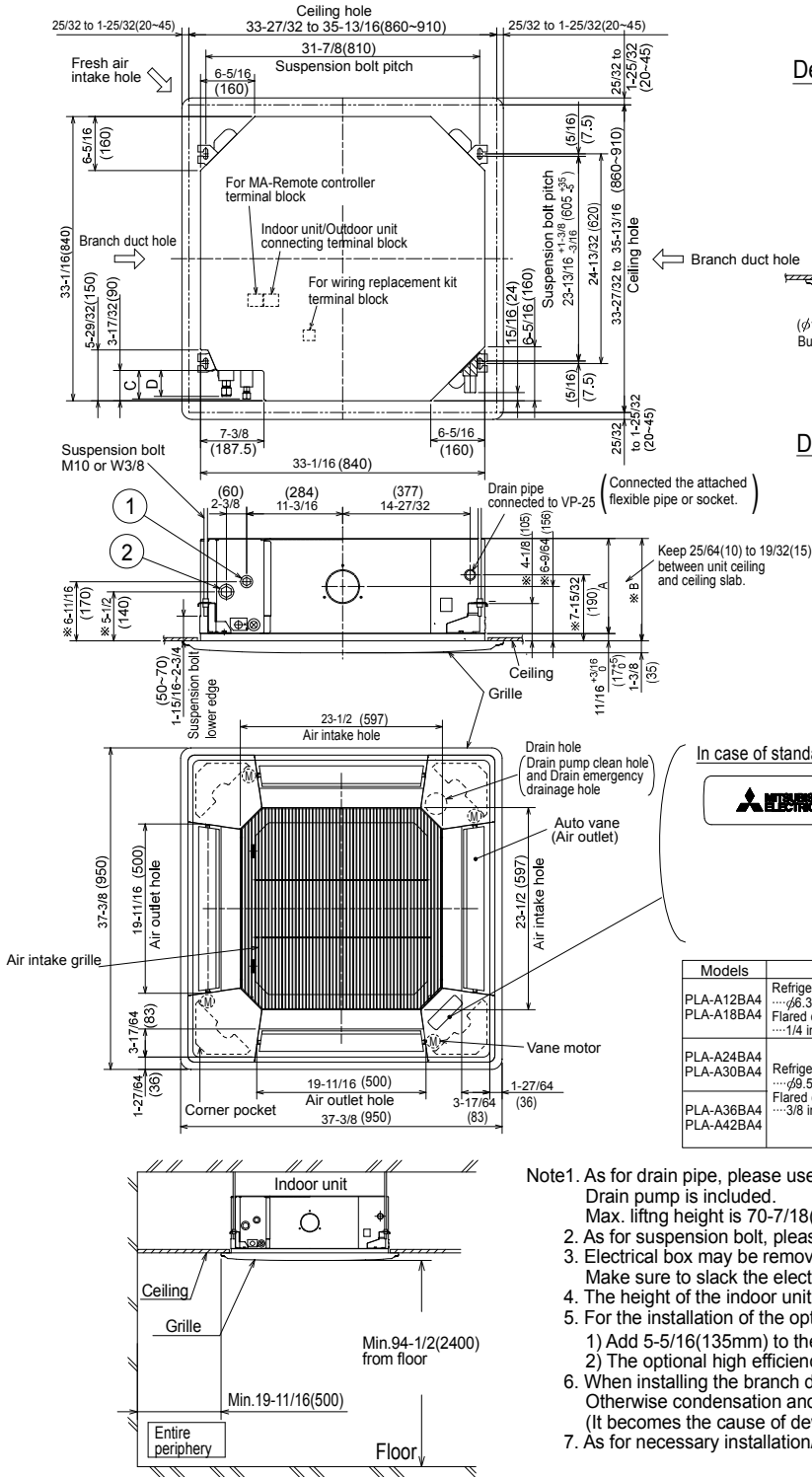
PLA-A18BA4

PLA-A36BA4

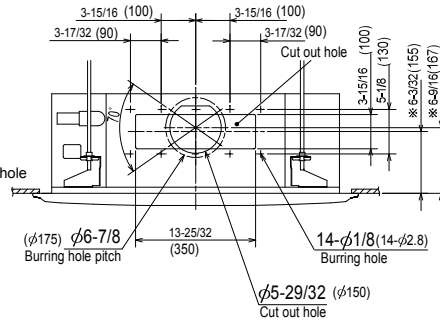
PLA-A24BA4

PLA-A42BA4

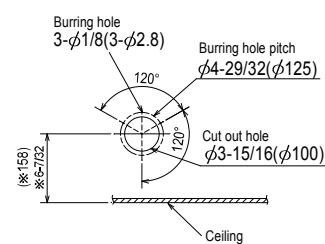
Unit : inch(mm)



Detail connecting of Branch duct(Both aspects)



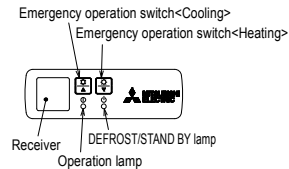
Detail drawing of fresh air intake hole



In case of standard grille



In case of IR wireless remote controller



Models	①	②	A	B	C	D
PLA-A12BA4	Refrigerant pipe ...φ6.35	Refrigerant pipe ...φ12.7				
PLA-A18BA4	Flared connection ...1/4 inch	Flared connection ...1/2 inch				
PLA-A24BA4	Refrigerant pipe ...φ9.52	Refrigerant pipe ...φ15.88	9-1/2 (241)	10-3/16 (258)	3-5/32 (80)	2-29/32 (74)
PLA-A30BA4	Flared connection ...3/8 inch	Flared connection ...5/8 inch				
PLA-A36BA4			11-1/16 (281)	11-3/4 (298)	3-11/32 (85)	3-1/32 (77)
PLA-A42BA4						

Note1. As for drain pipe, please use VP-25(O.D. φ1-1/4(φ32) PVC TUBE).

Drain pump is included.

Max. lifting height is 70-7/18(850mm) from the ceiling.

2. As for suspension bolt, please use M10 or W3/8.(Procured at local site)

3. Electrical box may be removed for the service purpose.

Make sure to slack the electrical wire little bit for control/power wires connection.

4. The height of the indoor unit is able to be adjusted with the grille attached.

5. For the installation of the optional high efficiency filter or optional multi-functional casement.

1) Add 5-5/16(135mm) to the dimensions * marked on the figure.

2) The optional high efficiency filter must be used jointly with the multi-functional casement.

6. When installing the branch ducts, be sure to insulate adequately.

Otherwise condensation and dripping may occur.

(It becomes the cause of dew drops/water dew.)

7. As for necessary installation/service space, please refer to the left figure.