

TECHNICAL DATA BOOK

<Indoor unit>

[Model names]

HYPER HEATING INVERTER

PLA-A·BA
PKA-A·HA
PKA-A·HAL
PKA-A·KA
PKA-A·KAL
PCA-A·KA

<Outdoor unit>

[Model name]

PUZ-HA30NHA2
PUZ-HA36NHA2

CONTENTS

1. REFERENCE SERVICE MANUAL	2
2. SPECIFICATIONS	3
3. OUTLINES AND DIMENSIONS	5
4. WIRING DIAGRAM	11
5. REFRIGERANT SYSTEM DIAGRAM	16
6. PERFORMANCE CURVES	18
7. CORRECTION FACTORS	20
8. AIR FLOW DATA	22
9. NOISE CRITERION CURVES	29
10. OPTIONAL PARTS	Back cover

For information on service, please refer to the service manual as follows.

1-1. INDOOR UNIT

Model name	Service Ref.	Service Manual No.
PLA-A18/30/36BA	PLA-A18BA ₁ PLA-A30BA ₁ PLA-A36BA ₁	OCH420 OCB420
PKA-A18HA PKA-A18HAL	PKA-A18HA PKA-A18HAL	OCH456 OCB456
PKA-A30/36KA PKA-A30/36KAL	PKA-A30/36KA.TH PKA-A30/36KAL.TH	OCH457 OCB457
PCA-A30/36KA	PCA-A30/36KA	OCH455 OCB455

1-2. OUTDOOR UNIT

Model name	Service Ref.	Service Manual No.
PUZ-HA30/36NHA2	PUZ-HA30/36NHA2	OCH426 OCB426

Model name	Indoor unit		PLA-A30BA	PLA-A36BA	PKA-A30KA(L)	PKA-A36KA(L)
Cooling	Outdoor unit		PUZ-HA30NHA2	PUZ-HA36NHA2	PUZ-HA30NHA2	PUZ-HA36NHA2
	Max. Capacity	BTU/h	30,000	36,000	30,000	34,200
	Rated Capacity	BTU/h	30,000	34,000	30,000	33,500
	Min. Capacity	BTU/h	18,000	18,000	18,000	18,000
	Total Input	W	2,450	2,690	2,500	2,790
	EER	BTU/h/W	12.2	12.6	12.0	12.0
	SEER	BTU/h/W	15.6	17.0	16.5	16.2
	Moisture Removal	Pints/h	7.2	7.1	8.1	8.7
	*1 SHF		0.73	0.71	0.70	0.71
Heating	Max. Capacity	BTU/h	34,000	40,000	34,000	40,000
	Rated Capacity	BTU/h	32,000	38,000	32,000	38,000
	Min. Capacity	BTU/h	18,000	18,000	18,000	18,000
	Total Input	W	3,440	3,230	2,930	3,410
	COP	W/W	2.73	3.45	3.20	3.27
Heating at 17°F(-8.3°C)	*1 HSPF(4/5)	BTU/h/W	9.4 / 7.1	10.0 / 8.0	9.5 / 7.3	10.0 / 7.8
	Max. Capacity	BTU/h	32,000	38,000	32,000	38,000
	Total Input	W	5,720	5,300	5,080	6,010
Heating at 5°F(-15°C)	*2 COP	W/W	1.64	2.10	1.85	1.85
	Max. Capacity	BTU/h	32,000	38,000	32,000	38,000
	Total Input	W	6,630	5,860	5,770	6,760
Power supply	*3 COP	W/W	1.41	1.90	1.63	1.65
	Phase, Cycle, Voltage		1phase, 60Hz, 208/230V		1phase, 60Hz, 208/230V	
Voltage	Breaker size	A	30		30	
	Indoor - Outdoor S1 - S2		AC208/230V		AC208/230V	
	Indoor - Outdoor S2 - S3		DC24V		DC24V	
	Indoor - Remote Controller		DC12V		DC12V : Wired type	
Indoor unit	MCA	A	1	2	1	
	MOCP	A	15		15	
	Fan Motor	F.L.A.	0.51	1.00	0.36	0.57
	Fan Motor Output	W	50	120	56	
	Airflow DRY *4	CMM	14-16-18-21	20-23-26-30	18-20-22	20-23-26
	Airflow WET *4	CMM	13-15-17-20	19-22-25-29	16-18-20	18-21-23
	Airflow DRY *4	CFM	490-570-640-740	710-810-920-1060	635-705-775	705-810-920
	Airflow WET *4	CFM	460-530-600-710	670-770-880-1030	570-635-700	635-730-830
	External pressure	Pa	0		0	
	Sound level *4	dB(A)	28-30-32-34	32-34-37-40	39-42-45	43-46-49
	External finish (Grille)		White Munsell 6.4Y 8.9/0.4		White Munsell 1.0Y 9.2/0.2	
	Dimension Unit (Grille)	W : mm[inch]	840(950) [33-1/16(37-3/8)]		1170 [46-1/16]	
		D : mm[inch]	840(950) [33-1/16(37-3/8)]		295 [11-5/8]	
		H : mm[inch]	258(35) [10-3/16(1-3/8)] 298(35) [11-3/4(1-3/8)]		365 [14-3/8]	
	Weight Unit(Grille)	kg	23(6)	25(6)	21	
	Weight Unit(Grille)	lbs	51(13)	55(13)	46	
	Field drain pipe size	mm[inch]	O.D. 32 [1-1/4]		I.D. 16 [5/8]	
Remote Controller			Attached in Grille		Attached in Indoor unit	
Outdoor unit	MCA	A	28		28	
	MOCP	A	40		40	
	Fan Motor	F.L.A.	0.4 + 0.4		0.4 + 0.4	
	Fan Motor Output	W	60 + 60		60 + 60	
	Compressor	Type	ANB33FJEMT	ANB33FJEMT	ANB33FJEMT	ANB33FJEMT
		R.L.A.	18		18	
		L.R.A.	27.5		27.5	
	Air flow	CMM[CFM]	100[3,530]		100[3,530]	
	Refrigerant Control		Electronic Expansion Valve		Electronic Expansion Valve	
	Defrost Method		Reverse Cycle		Reverse Cycle	
	Sound level at cooling	dB(A)	52		52	
	Sound level at heating	dB(A)	53		53	
	External finish		Ivory Munsell 3Y 7.8/1.1		Ivory Munsell 3Y 7.8/1.1	
	Dimension	W : mm[inch]	950 [37-3/8]		950 [37-3/8]	
		D : mm[inch]	330 + 30 [13 + 1-3/16]		330 + 30 [13 + 1-3/16]	
		H : mm[inch]	1,350 [53-1/8]		1,350 [53-1/8]	
	Weight	kg[lbs]	120 [265]		120 [265]	
	Refrigerant	Type	R410A		R410A	
		Charge	kg[lbs, oz]	5.5 [12 lbs]	5.5 [12 lbs]	
		Oil	L[oz]	1.4(FV50S) [45]	1.4(FV50S) [45]	
Refrigerant pipe size	Gas side O.D.	mm[inch]	15.88 [5/8]		15.88 [5/8]	
	Liquid side O.D.	mm[inch]	9.52 [3/8]		9.52 [3/8]	
Refrigerant pipe length	Height difference		Max.30m [Max.100ft]		Max.30m [Max.100ft]	
	Length		Max.75m [Max.245ft]		Max.75m [Max.245ft]	
Refrigerant Piping			Not supplied		Not supplied	
Connection Method			Flared		Flared	

NOTES : *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)
 (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. 8.3°C(47°F), W.B. 6.1°C(43°F)
 *2.Conditions (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. -8.3°C(17°F), W.B. -9.4°C(15°F)
 *3.Conditions (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. -15°C(5°F), W.B. -15°C(5°F)

Operating range

		Indoor intake air temperature		Outdoor intake air temperature	
Cooling	Maximum	D.B. 32°C(90°F), W.B. 23°C(73°F)		D.B. 46°C(115°F)	
	Minimum	D.B. 19°C(66°F), W.B. 15°C(59°F)		D.B. -18°C(0°F)*	
Heating	Maximum	D.B. 28°C(83°F)		D.B. 21.1°C(70°F), W.B. 15°C(59°F)	
	Minimum	D.B. 17°C(63°F)		D.B. -25°C(-13°F), W.B. -25°C(-13°F)	

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



Model name	Indoor unit		PCA-A30KA	PCA-A36KA
	Outdoor unit		PUZ-HA30NHA2	PUZ-HA36NHA2
Cooling	Max. Capacity	BTU/h	30,000	36,000
	Rated Capacity	BTU/h	30,000	34,000
	Min. Capacity	BTU/h	18,000	18,000
	Total Input	W	2,480	2,810
	EER	BTU/h/W	12.1	12.1
	SEER	BTU/h/W	16.1	16.6
	Moisture Removal	Pints/h	8.3	8.2
Heating	*1 SHF		0.69	0.73
	Max. Capacity	BTU/h	34,000	40,000
	Rated Capacity	BTU/h	32,000	38,000
	Min. Capacity	BTU/h	18,000	18,000
	Total Input	W	2,990	3,270
	COP	W/W	3.14	3.41
	*1 HSPF(4/5)	BTU/h/W	9.3 / 7.2	10.3 / 8.2
Heating at 17°F(-8.3°C)	Max. Capacity	BTU/h	32,000	38,000
	Total Input	W	5,170	5,720
	*2 COP	W/W	1.81	1.95
Heating at 5°F(-15°C)	Max. Capacity	BTU/h	32,000	38,000
	Total Input	W	5,830	6,550
	*3 COP	W/W	1.61	1.70
Power supply	Phase, Cycle, Voltage		1phase, 60Hz, 208/230V	
	Breaker size	A	30	
Voltage	Indoor - Outdoor S1 - S2		AC208/230V	
	Indoor - Outdoor S2 - S3		DC24V	
	Indoor - Remote Controller		DC12V	
Indoor unit	MCA	A	1	2
	MOCP	A	15	
	Fan Motor	F.L.A.	0.54	0.97
	Fan Motor Output	W	95	160
	Airflow DRY (Lo-M2-M1-Hi)	CMM	16-17-18-20	22-24-26-28
	Airflow WET (Lo-M2-M1-Hi)	CMM	15-16-17-19	20-22-24-26
	Airflow DRY (Lo-M2-M1-Hi)	CFM	565-600-635-705	775-850-920-990
	Airflow WET (Lo-M2-M1-Hi)	CFM	530-565-600-670	705-775-850-920
	External pressure	Pa	0	
	Sound level (Lo-M2-M1-Hi)	dB(A)	35-37-39-41	37-39-41-43
	External finish (Grille)		White Munsell 6.4Y 8.9/0.4	
	Dimension Unit (Grille)	W : mm[inch]	1280 [50-3/8]	1600 [63]
		D : mm[inch]	680 [26-3/4]	
		H : mm[inch]	230 [9-1/16]	
	Weight Unit(Grille)	kg	32	36
	Weight Unit(Grille)	lbs	71	79
	Field drain pipe size	mm[inch]	O.D. 26 [1-1/32]	
Remote Controller			Attached in Grille	
Outdoor unit	MCA	A	28	
	MOCP	A	40	
	Fan Motor	F.L.A.	0.4 + 0.4	
	Fan Motor Output	W	60 + 60	
	Compressor	Type	ANB33FJEMT	
		R.L.A.	18	
		L.R.A.	27.5	
	Air flow	CMM[CFM]	100[3,530]	
	Refrigerant Control		Electronic Expansion Valve	
	Defrost Method		Reverse Cycle	
	Sound level at cooling	dB(A)	52	
	Sound level at heating	dB(A)	53	
	External finish		Ivory Munsell 3Y 7.8/1.1	
	Dimension	W : mm[inch]	950 [37-3/8]	
		D : mm[inch]	330 + 30 [13 + 1-3/16]	
		H : mm[inch]	1,350 [53-1/8]	
	Weight	kg[lbs]	120 [265]	
Refrigerant	Type		R410A	
	Charge	kg[lbs, oz]	5.5 [12 lbs]	
	Oil	L[oz]	1.4(FV50S) [45]	
Refrigerant pipe size	Gas side O.D.	mm[inch]	15.88 [5/8]	
	Liquid side O.D.	mm[inch]	9.52 [3/8]	
Refrigerant pipe length	Height difference		Max.30m [Max.100ft]	
	Length		Max.75m [Max.245ft]	
Refrigerant Piping			Not supplied	
Connection Method			Flared	

NOTES : *1.Rating conditions (cooling)-Indoor : D.B. 26.7°C(80°F), W.B. 19.4°C(67°F) Outdoor : D.B. 35°C(95°F), W.B. 23.9°C(75°F)
 (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. 8.3°C(47°F), W.B. 6.1°C(43°F)
 *2.Conditions (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. -8.3°C(17°F), W.B. -9.4°C(15°F)
 *3.Conditions (heating)-Indoor : D.B. 21.1°C(70°F), W.B. 15.6°C(60°F) Outdoor : D.B. -15°C(5°F), W.B. -15°C(5°F)

Operating range

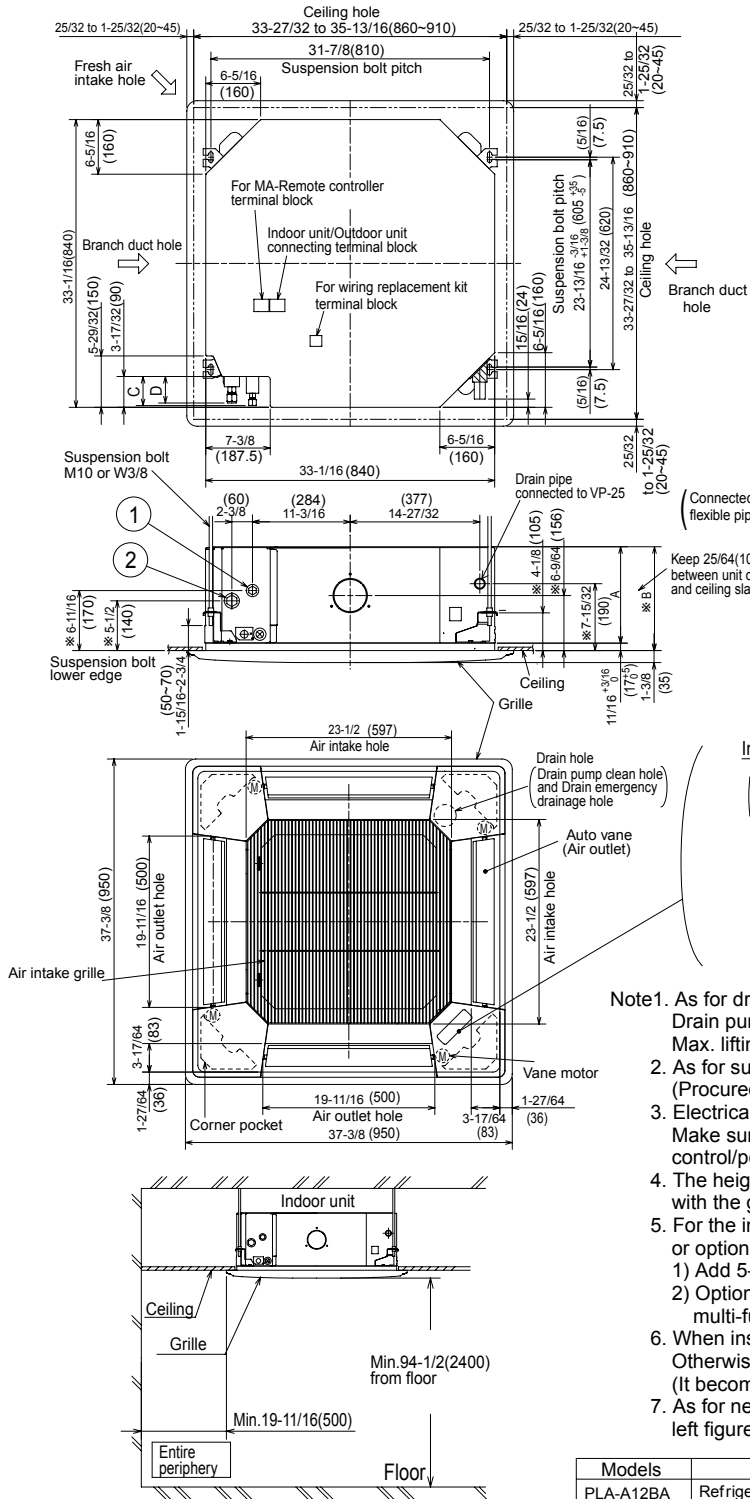
		Indoor intake air temperature	Outdoor intake air temperature
Cooling	Maximum	D.B. 32°C(90°F), W.B. 23°C(73°F)	D.B. 46°C(115°F)
	Minimum	D.B. 19°C(66°F), W.B. 15°C(59°F)	D.B. -18°C(0°F)*
Heating	Maximum	D.B. 28°C(83°F)	D.B. 21.1°C(70°F), W.B. 15°C(59°F)
	Minimum	D.B. 17°C(63°F)	D.B. -25°C(-13°F), W.B. -25°C(-13°F)

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

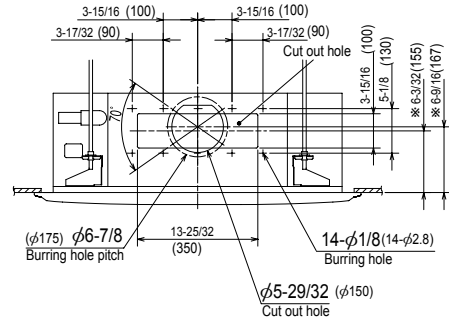
INDOOR UNIT

PLA-A18BA PLA-A30BA PLA-A36BA

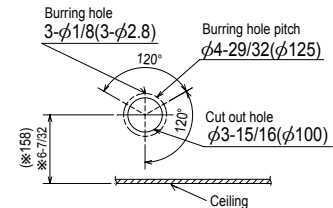
Unit: inch (mm)



Detail connecting of branch duct (Both aspects)



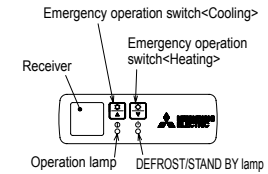
Detail drawing of fresh air intake hole



In case of standard grille



In case of wireless remote controller

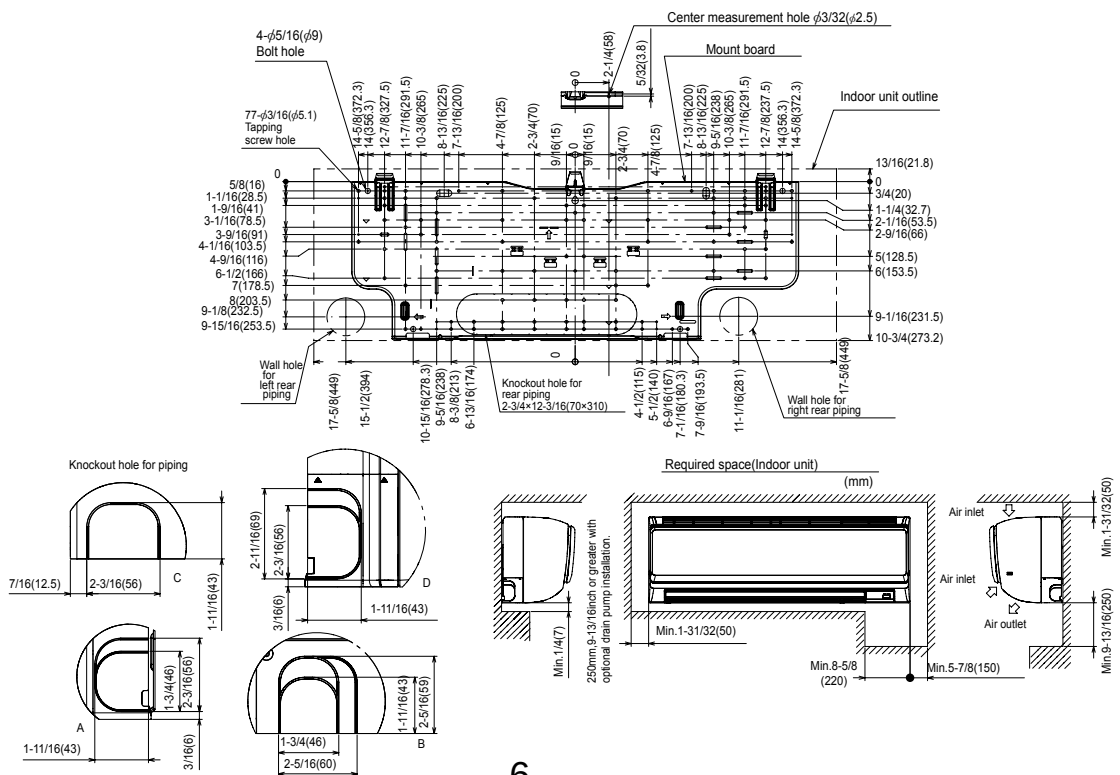
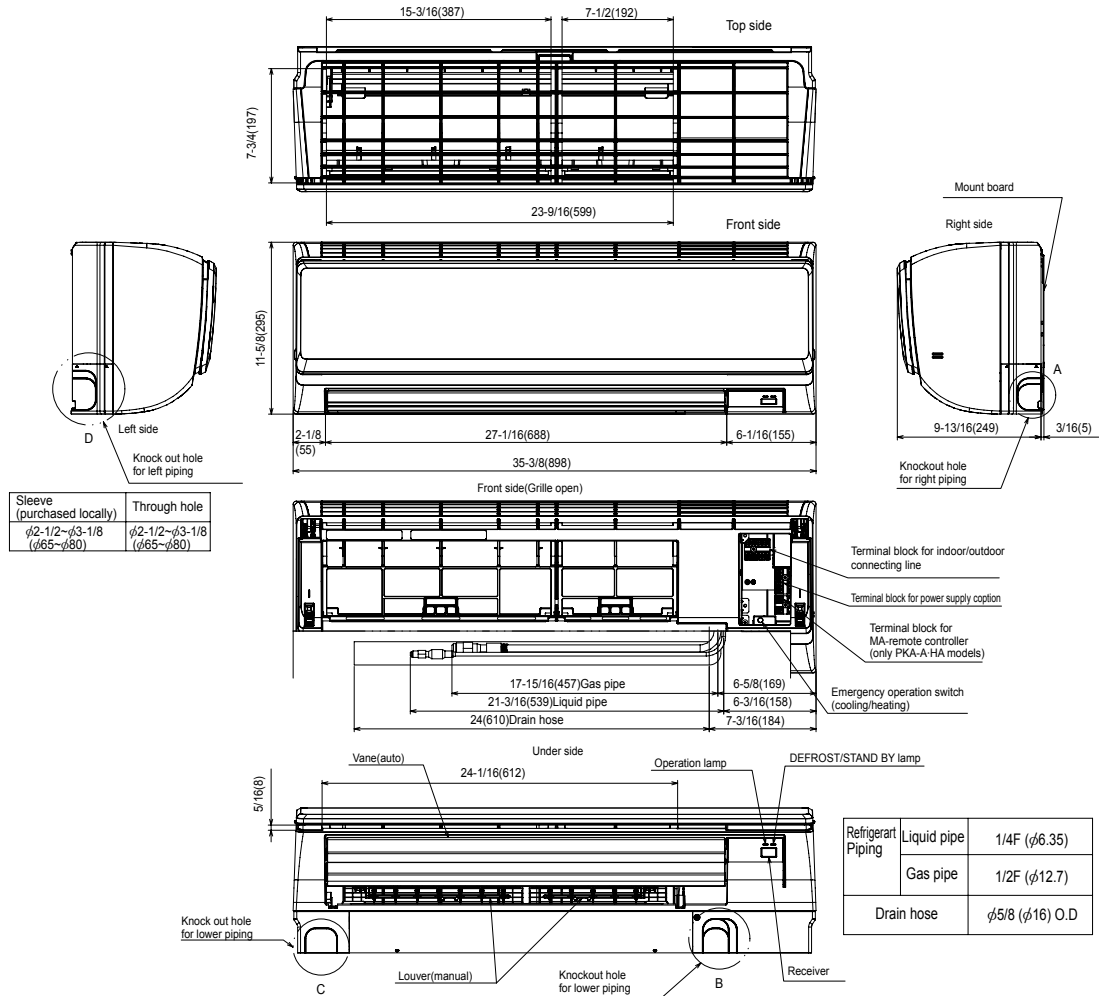


- Note1. As for drain pipe, please use VP-25 (O.D. $\phi 32$ PVC TUBE).
 Drain pump is included.
 Max. lifting height is 70-7/18 (850mm) from the ceiling.
- As for suspension bolt, please use M10 or W3/8.
 (Procured at local site)
 - Electrical box may be removed for the service purpose.
 Make sure to slack the electrical wire little bit for control/power wires connection.
 - The height of the indoor unit can be adjusted with the grille attached.
 - 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) Optional high efficiency filter must be used jointly with optional multi-functional casement.
 - 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.)
 - As for necessary installation/service space, please refer to the left figure.

Models	①	②	A	B	C	D
PLA-A12BA PLA-A18BA	Refrigerant pipe ... $\phi 6.35$ mm Flared connection ...1/4	Refrigerant pipe ... $\phi 12.7$ mm Flared connection ...1/2	9-1/2 (241)	10-3/16 (258)	3-5/32 (80)	2-29/32 (74)
PLA-A24BA PLA-A30BA PLA-A36BA PLA-A42BA	Refrigerant pipe ... $\phi 9.52$ mm Flared connection ...3/8	Refrigerant pipe ... $\phi 15.88$ mm Flared connection ...5/8	11-1/16 (281)	11-3/4 (298)	3-11/32 (85)	3-1/32 (77)

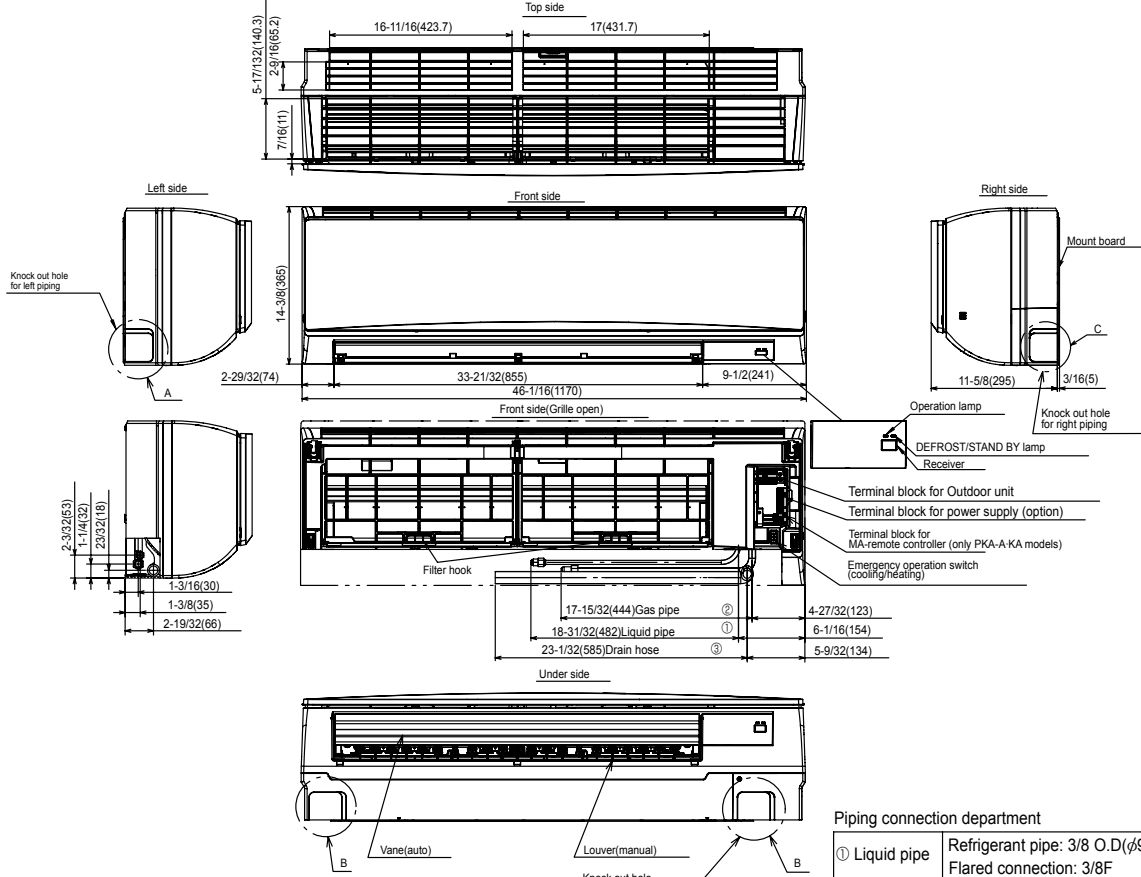
PKA-A18HA PKA-A18HAL

Unit: inch (mm)



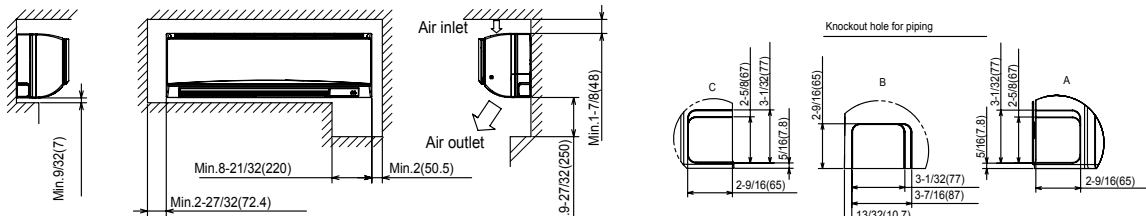
PKA-A30,36KA PKA-A30,36KAL

Unit: inch (mm)



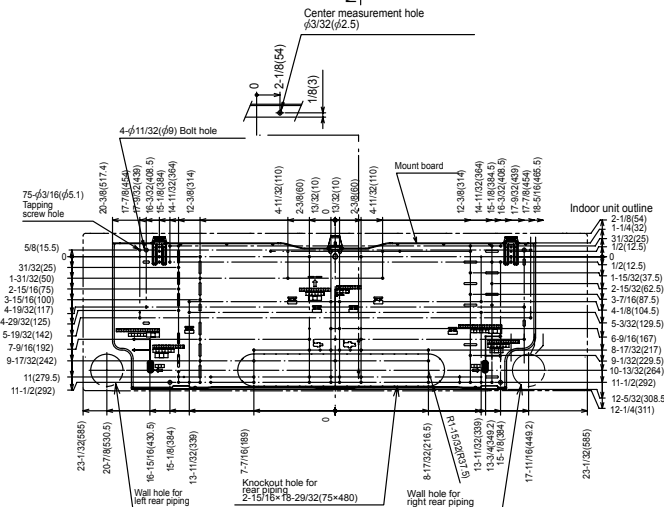
Sleeve (purchased locally)	Through hole
$\phi 2-15/16$ ($\phi 75$)	$\phi 2-15/16-\phi 3-5/32$ ($\phi 75-\phi 80$)

Required space (indoor unit)



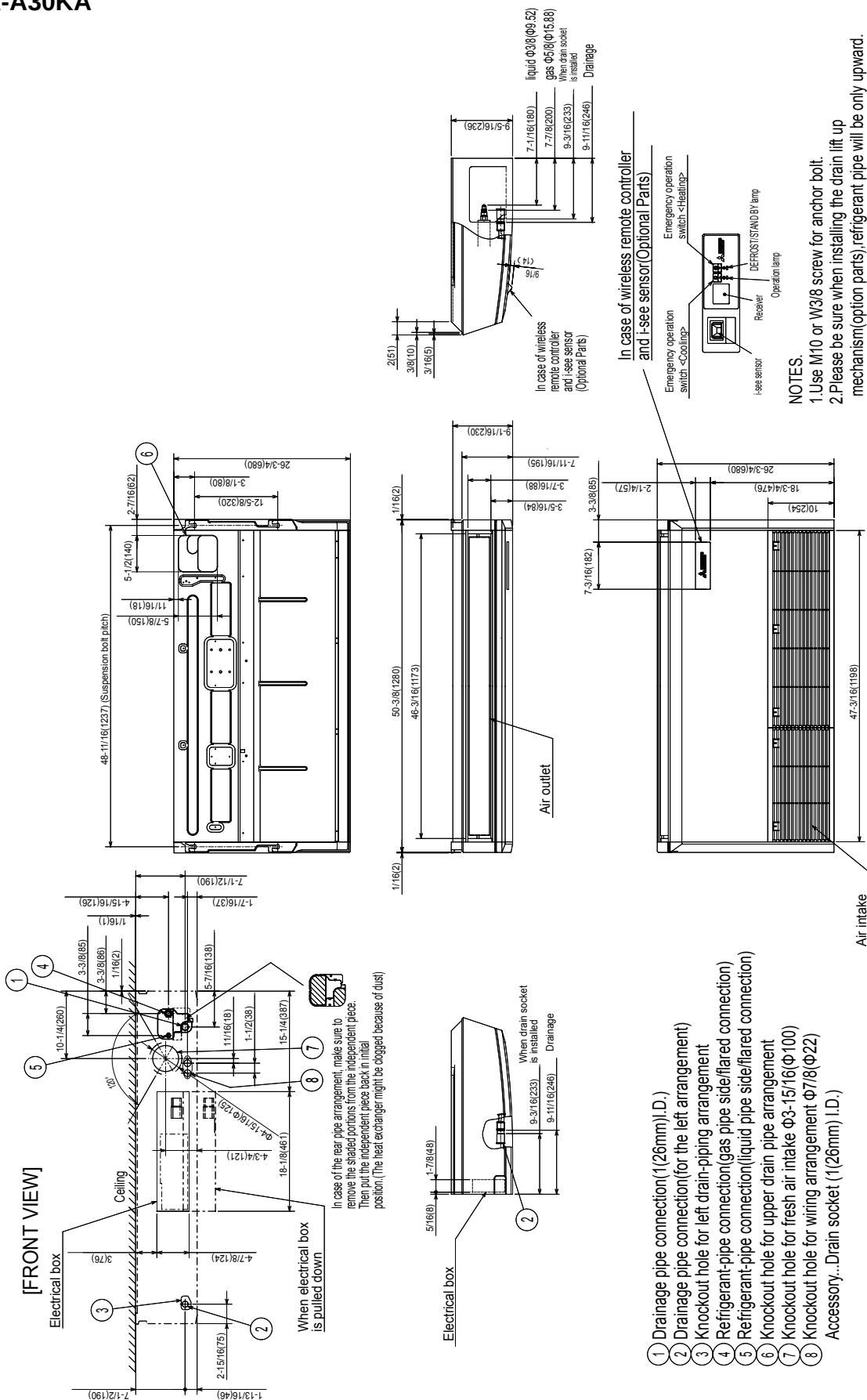
Piping connection department

① Liquid pipe	Refrigerant pipe: 3/8 O.D.($\phi 9.52$) Flared connection: 3/8F
② Gas pipe	Refrigerant pipe: 5/8 O.D.($\phi 15.88$) Flared connection: 5/8F
③ Drain hose	5/8($\phi 16$) O.D



PCA-A30KA

Unit: inch (mm)

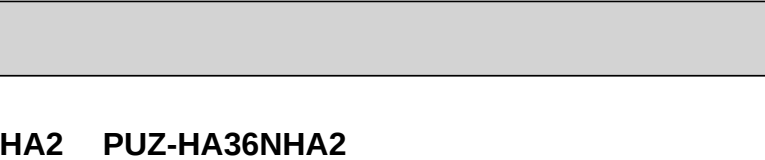


--

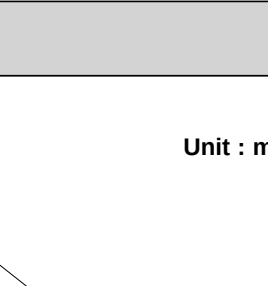
4 PIPING-WIRING DIRECTIONS

Please secure the unit firmly with 4 foundation (M10<W3/8>) bolts. (Bolts and washers must be purchased locally.)

Piping and wiring connections can be made from 4 directions: front, right, rear and below.



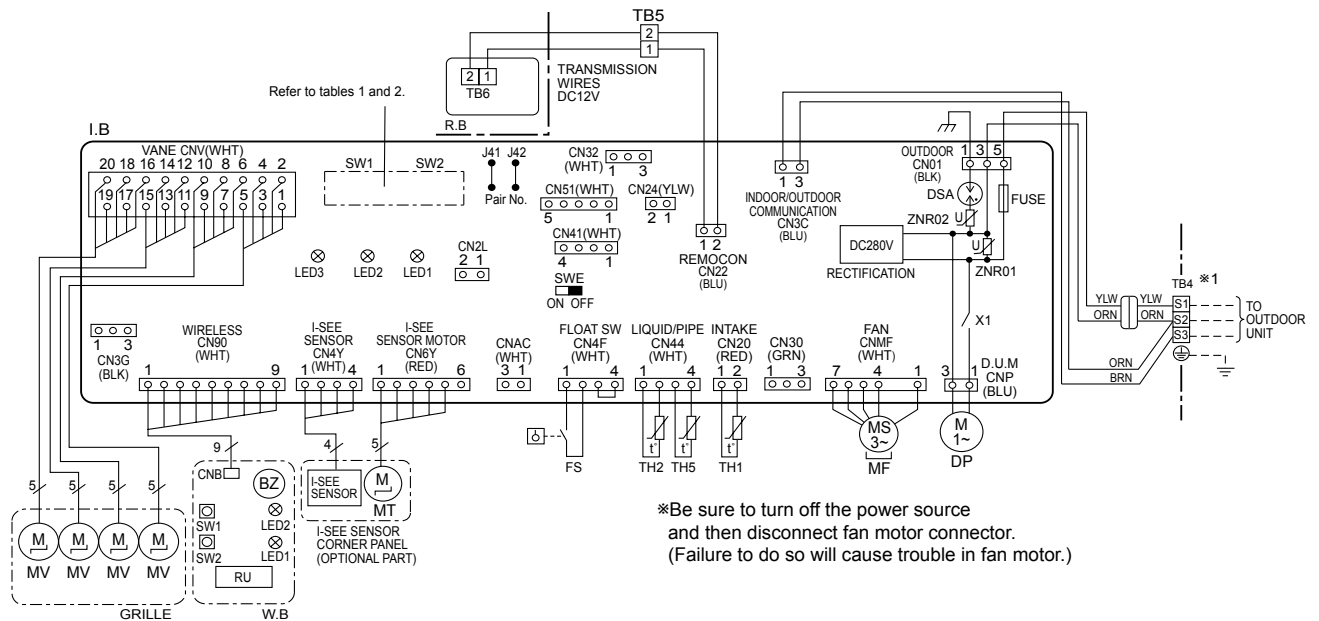
1101



PLA-A18BA PLA-A30BA PLA-A36BA

[LEGEND]

SYMBOL	NAME	SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD	MF	FAN MOTOR
CN2L	CONNECTOR (LOSSNAY)	MV	VANE MOTOR
CN24	CONNECTOR<BACK-UP HEATING>	TB4	TERMINAL BLOCK (INDOOR/OUTDOOR CONNECTING LINE)
CN30	CONNECTOR<LLC>	TB5, TB6	TERMINAL BLOCK (REMOTE CONTROLLER TRANSMISSION LINE)
CN32	CONNECTOR (REMOTE SWITCH)	TH1	ROOM TEMP. THERMISTOR (32°F/15kΩ, 77°F/5.4kΩ DETECT)
CN41	CONNECTOR (HA TERMINAL-A)	TH2	PIPE TEMP. THERMISTOR/LIQUID (32°F/15kΩ, 77°F/5.4kΩ DETECT)
CN51	CONNECTOR (CENTRALLY CONTROL)	TH5	COND. / EVA. TEMP. THERMISTOR (32°F/15kΩ, 77°F/5.4kΩ DETECT)
DSA	SURGE ABSORBER	OPTION PART	
FUSE	FUSE (T6.3A/250V)	W.B	PCB FOR WIRELESS REMOTE CONTROLLER
LED1	POWER SUPPLY (I.B)	BZ	BUZZER
LED2	POWER SUPPLY (R.B)	LED1	LED (OPERATION INDICATION: GREEN)
LED3	TRANSMISSION (INDOOR-OUTDOOR)	LED2	LED (PREPARATION FOR HEATING: ORANGE)
SW1	SWITCH (MODEL SELECTION) *See table 1.	RU	RECEIVING UNIT
SW2	SWITCH (CAPACITY CODE) *See table 2.	SW1	EMERGENCY OPERATION (HEAT/DOWN)
SWE	CONNECTOR (EMERGENCY OPERATION)	SW2	EMERGENCY OPERATION (COOL/UP)
X1	RELAY (DRAIN PUMP)		
ZNR01, 02	VARISTOR		
DP	DRAIN-UP MACHINE		
FS	DRAIN FLOAT SWITCH		



<Table 1>SW1(MODEL SELECTION)

SW1	Service
1 2 3 4 5	ON OFF

<Table 2>SW2(CAPACITY CODE)

SW2	
MODELS	Service
PLA-A12BA	1 2 3 4 5 ON OFF
PLA-A18BA	1 2 3 4 5 ON OFF
PLA-A24BA	1 2 3 4 5 ON OFF
PLA-A30BA	1 2 3 4 5 ON OFF
PLA-A36BA	1 2 3 4 5 ON OFF
PLA-A42BA	1 2 3 4 5 ON OFF

Notes: 1. Symbols used in wiring diagram above are, : Connector, : Terminal block.

2. Indoor and outdoor connecting wires have polarities, make sure to match terminal numbers (S1, S2, S3) for correct wiring.
3. Since the outdoor side electric wiring may change, be sure to check the outdoor unit electric wiring for servicing.

*1. Use copper supply wires.

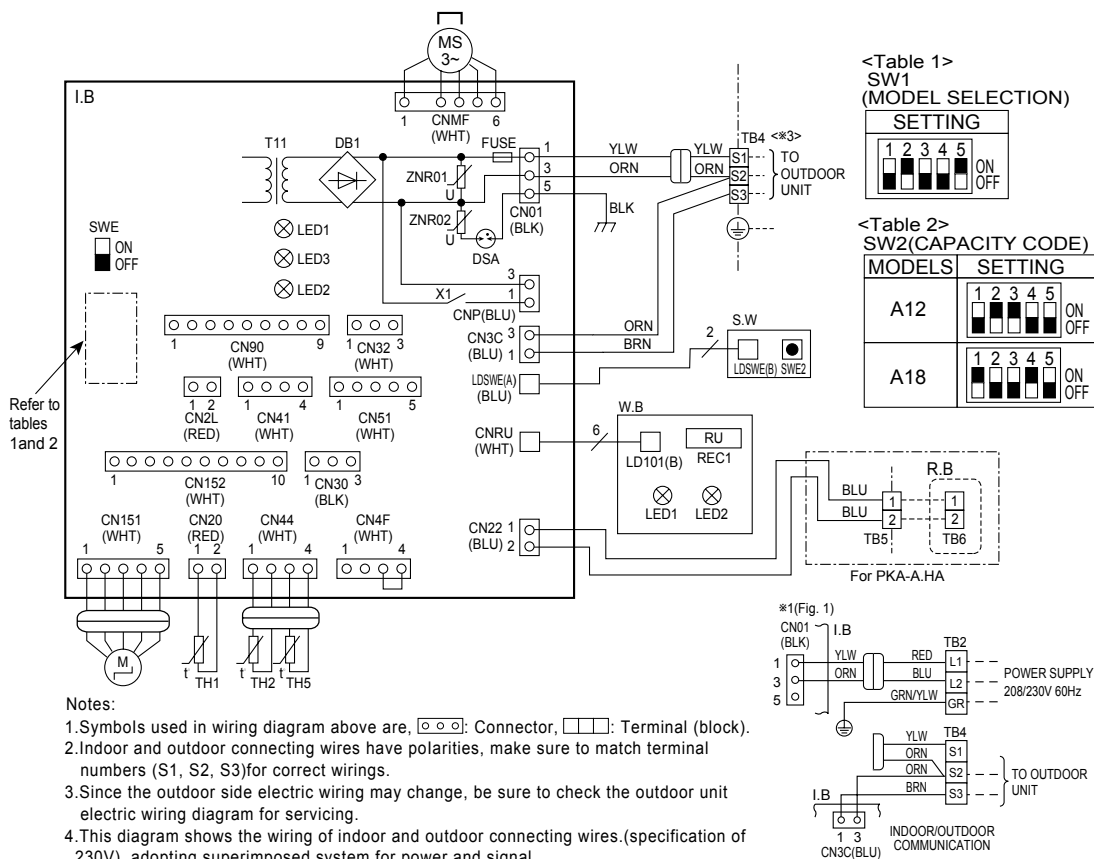
[Self-diagnosis]

1. For details on how to operate self-diagnosis with the wireless remote control, refer to the technical manuals etc.
2. For the wired remote control: When you quickly press twice the CHECK switch on the remote control, the unit begins self-diagnosis, and Check Codes generated in the past appear on the display.

PKA-A18HA PKA-A18HAL

[Explanation of symbols]

Symbol	Name	Symbol	Name
I.B	Indoor controller board	M	Vane motor
CN2L	Connector (LOSSNAY)	MS	Fan motor
CN30	Connector (LLC)	S.W	Switch board
CN32	Connector (Remote switch)	SWE2	Emergency operation
CN41	Connector (HA terminal-A)	TB2	Terminal block(Indoor unit Power (option))
CN51	Connector (Centrally control)	TB4	Terminal block (Indoor/outdoor connecting line)
CN90	Connector (Remote operation adapter)	TB5	Terminal block (Remote controller transmission line)
CN152	Connector (Back-up heating)	TH1	Room temp. Thermistor (32°F/15KΩ, 77°F/5.4KΩ Detect)
DSA	Surge absorber	TH2	Pipe temp. Thermistor/liquid (32°F/15KΩ, 77°F/5.4KΩ Detect)
FUSE	FUSE(T3.15A/250V)	TH5	Cond./eva. temp. Thermistor (32°F/15KΩ, 77°F/5.4KΩ Detect)
LED1	Power supply (I.B)	W.B	Pcb for wireless remote controller
LED2	Power supply (R.B)	LED1	LED (Operation indication: Green)
LED3	Transmission (Indoor-outdoor)	LED2	LED (Preparation for heating: Orange)
SW1	Switch (Model selection) *See table 1	REC1	Receiving unit
SW2	Switch (Capacity code) *See table 2		
SWE	Connector (Emergency operation)		
ZNR01,02	Varistor		
R.B	Wired remote controller		
TB6	Terminal block (Remote controller transmission line)		



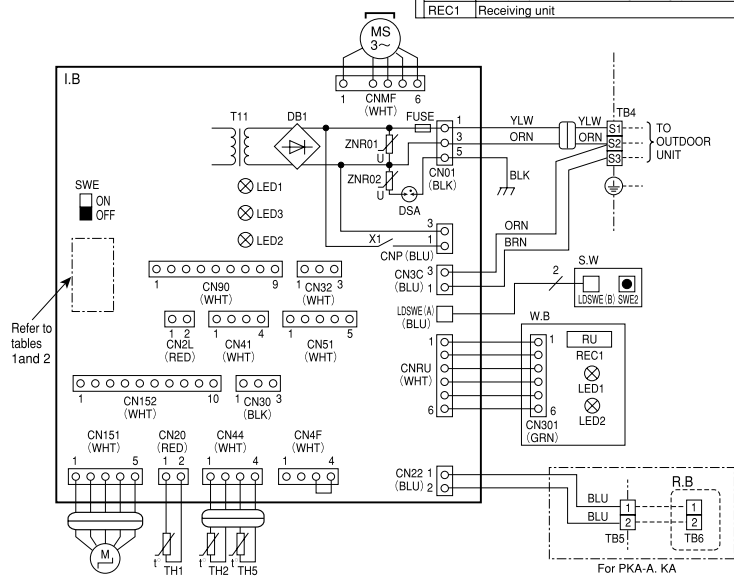
Notes:

1. Symbols used in wiring diagram above are, : Connector, : Terminal (block).
 2. Indoor and outdoor connecting wires have polarities, make sure to match terminal numbers (S1, S2, S3) for correct wirings.
 3. Since the outdoor side electric wiring may change, be sure to check the outdoor unit electric wiring diagram for servicing.
 4. This diagram shows the wiring of indoor and outdoor connecting wires.(specification of 230V), adopting superimposed system for power and signal.
- *1: If indoor and outdoor units have separate power supplies, refer to Fig 1.
- *2: For power supply system of this unit, refer to the caution label located near this diagram.
- *3: Use copper supply wires.

PKA-A30KA PKA-A30KAL PKA-A36KA PKA-A36KAL

[Explanation of symbols]

Symbol	Name	Symbol	Name
I.B	Indoor controller board	R.B	Wired remote controller
CN2L	Connector (LOSSNAY)	TB6	Terminal block (Remote controller transmission line)
CN30	Connector (LLC)	M	Vane motor
CN32	Connector (Remote switch)	MS	Fan motor
CN41	Connector (HA terminal-A)	S.W	Switch board
CN51	Connector (Centrally control)	SWE2	Emergency operation
CN90	Connector (Remote operation adapter)	TB2	Terminal block(Indoor unit Power (option))
CN152	Connector (Back-up heating)	TB4	Terminal block (Indoor/outdoor connecting line)
DSA	Surge absorber	TB5	Terminal block (Remote controller transmission line)
FUSE	FUSE(T3.15A/250V)	TH1	Room temp. Thermistor (32°F/15KΩ, 77°F/5.4KΩ Detect)
LED1	Power supply (I.B)	TH2	Pipe temp. Thermistor/liquid (32°F/15KΩ, 77°F/5.4KΩ Detect)
LED2	Power supply (R.B)	TH5	Cond./eva. temp. Thermistor (32°F/15KΩ, 77°F/5.4KΩ Detect)
LED3	Transmission (Indoor-outdoor)	W.B	Pcb for wireless remote controller
SW1	Switch (Model selection) ※See table 1	LED1	LED (Operation indication : Green)
SW2	Switch (Capacity code) ※See table 2	LED2	LED (Preparation for heating: Orange)
SWE	Connector (Emergency operation)	REC1	Receiving unit
ZNR01,02	Varistor		



(Table 1)

SW1 (MODEL SELECTION)

SETTING
1 2 3 4 5
ON OFF

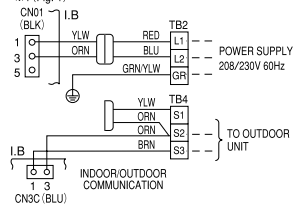
(Table 2)
SW2 (CAPACITY CODE)

MODELS	SETTING	MODELS	SETTING	MODELS	SETTING
PKA-A24KA (L)	1 2 3 4 5	PKA-A30KA (L)	1 2 3 4 5	PKA-A36KA (L)	1 2 3 4 5
	ON OFF		ON OFF		ON OFF

Notes:

- 1.Symbols used in wiring diagram above are, : Connector, : Terminal (block).
- 2.Indoor and outdoor connecting wires have polarities, make sure to match terminal numbers (S1, S2, S3)for correct wirings.
- 3.Since the outdoor side electric wiring may change, be sure to check the outdoor unit electric wiring diagram for servicing.
- 4.This diagram shows the wiring of indoor and outdoor connecting wires.(specification of 230V), adopting superimposed system for power and signal.
 - ※1: If indoor and outdoor units have separate power supplies, refer to Fig 1.
 - ※2: For power supply system of this unit, refer to the caution label located near this diagram.
 - ※3: Use copper supply wires.

※1 (Fig. 1)

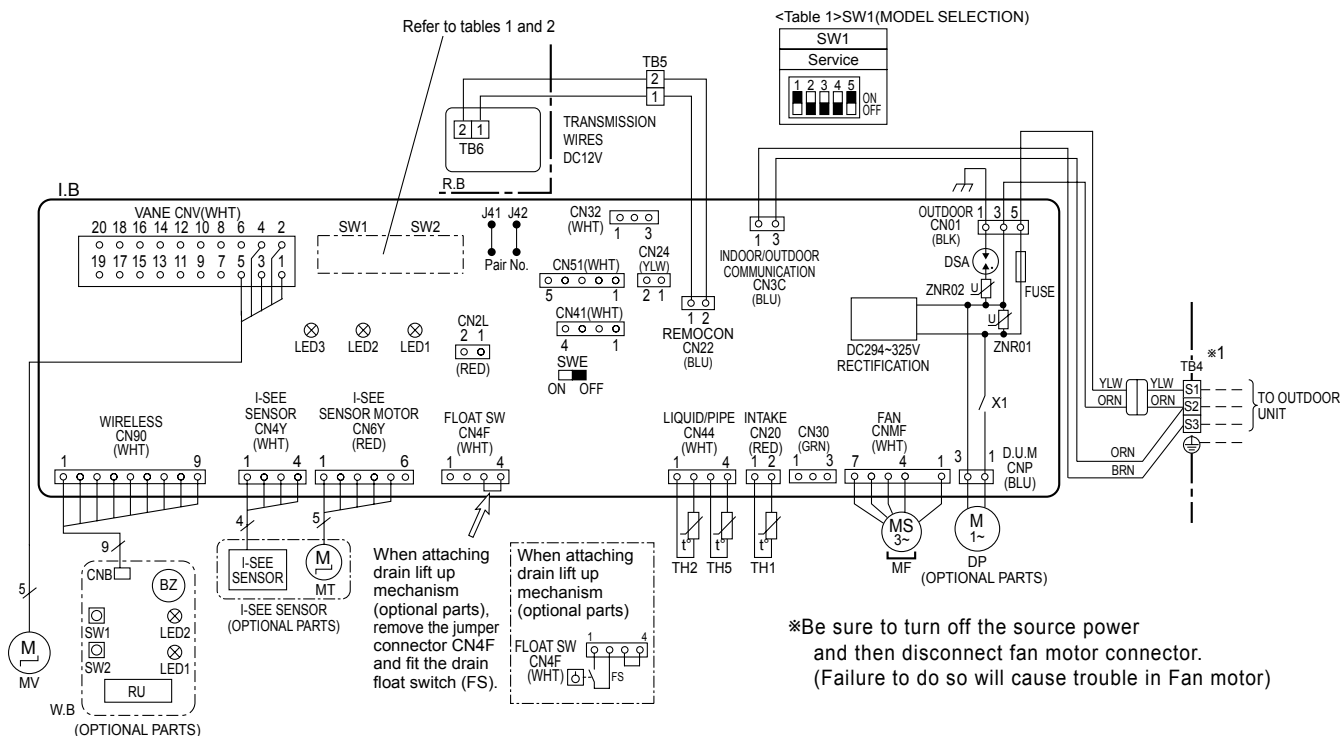


PCA-A30KA PCA-A36KA

[LEGEND]

SYMBOL	NAME	SYMBOL	NAME
I.B	INDOOR CONTROLLER BOARD	TB4	TERMINAL BLOCK (INDOOR/OUTDOOR CONNECTING LINE)
CN2L	CONNECTOR (LOSSNAY)	TB5, TB6	TERMINAL BLOCK (REMOTE CONTROLLER TRANSMISSION LINE)
CN24	CONNECTOR (BACK-UP HEATING)	TH1	ROOM TEMP. THERMISTOR (32°F / 15kΩ, 77°F/ 5. 4kΩ DETECT)
CN30	CONNECTOR (LLC)	TH2	PIPE TEMP. THERMISTOR/LIQUID (32°F / 15kΩ, 77°F/ 5. 4kΩ DETECT)
CN32	CONNECTOR (REMOTE SWITCH)	TH5	COND. / EVA. TEMP. THERMISTOR (32°F / 15kΩ, 77°F/ 5. 4kΩ DETECT)
CN41	CONNECTOR (HA TERMINAL-A)		
CN51	CONNECTOR (CENTRALLY CONTROL)		
DSA	SURGE ABSORBER		
FUSE	FUSE (T6.3AL250V)		
LED1	POWER SUPPLY (I.B)		
LED2	POWER SUPPLY (R.B)		
LED3	TRANSMISSION (INDOOR-OUTDOOR)		
SW1	SWITCH (MODEL SELECTION) *See table 1		
SW2	SWITCH (CAPACITY CODE) *See table 2		
SWE	CONNECTOR (EMERGENCY OPERATION)		
X1	RELAY (DRAIN LIFT UP MECHANISM)		
ZNR01,02	VARISTOR		
R.B	WIRED REMOTE CONTROLLER BOARD		
MF	FAN MOTOR		
MV	VANE MOTOR		

OPTIONAL PARTS	
W.B	PCB FOR WIRELESS REMOTE CONTROLLER
BZ	BUZZER
LED1	LED (OPERATION INDICATION : GREEN)
LED2	LED (PREPARATION FOR HEATING : ORANGE)
RU	RECEIVING UNIT
SW1	EMERGENCY OPERATION (HEAT / DOWN)
SW2	EMERGENCY OPERATION (COOL / UP)
DP	DRAIN LIFT UP MECHANISM
FS	DRAIN FLOAT SWITCH



<Table 2>SW2(CAPACITY CODE)

SW2			
MODELS	Service	MODELS	Service
PCA-A24KA	1 2 3 4 5 ON OFF	PCA-A36KA	1 2 3 4 5 ON OFF
PCA-A30KA	1 2 3 4 5 ON OFF	PCA-A42KA	1 2 3 4 5 ON OFF

Notes: 1. Symbols used in wiring diagram above are, : Connector : Terminal block.

2. Indoor and outdoor connecting wires have polarities, make sure to match terminal numbers (S1, S2, S3) for correct wirings.

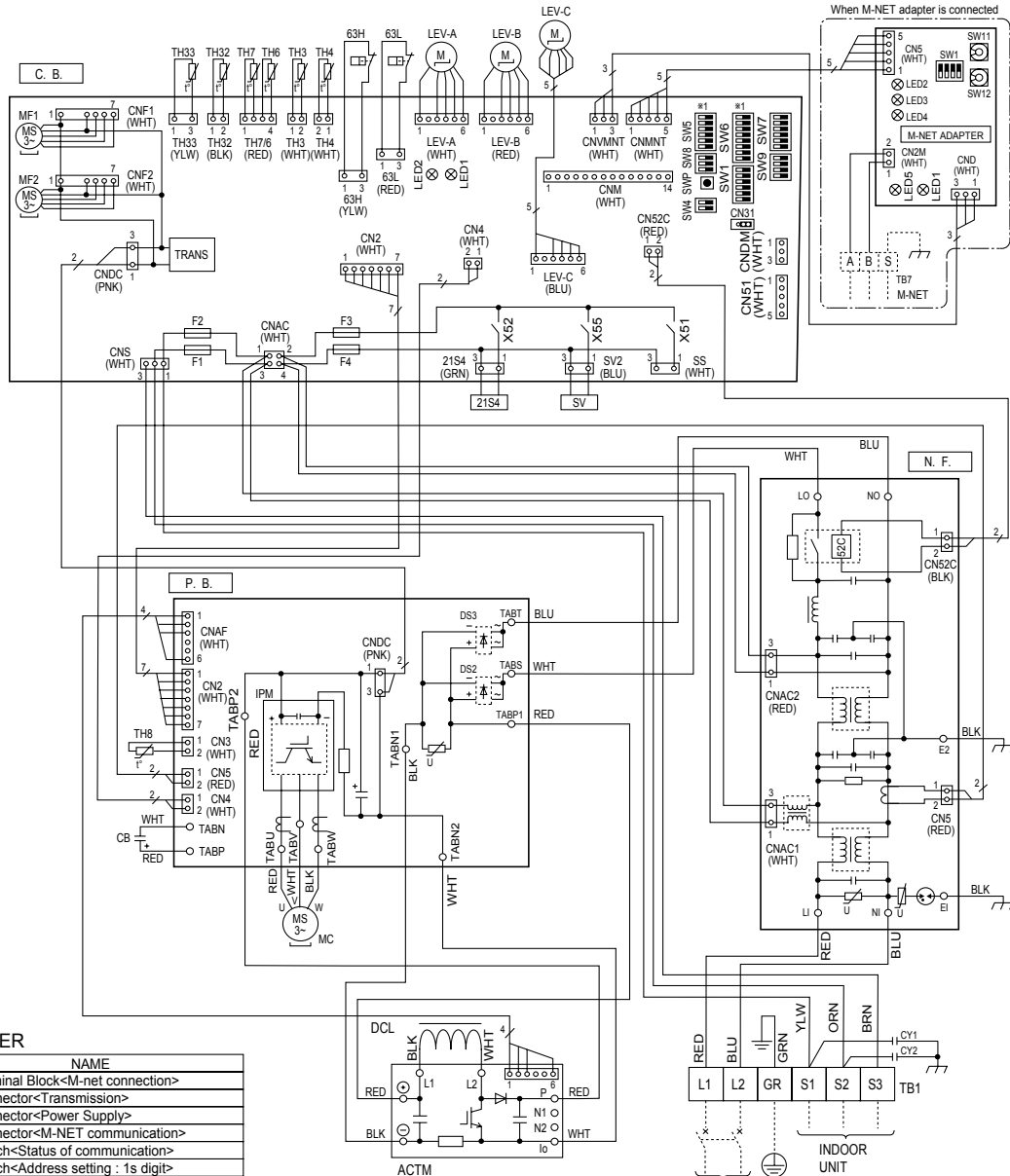
3. Since the outdoor side electric wiring may change, be sure to check the outdoor unit electric wiring for servicing.

*1: Use copper supply wire.

PUZ-HA30NHA2 PUZ-HA36NHA2

[LEGEND]

SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
TB1	Terminal Block<Power Supply, Indoor/Outdoor >	P.B.	Power Circuit Board	SW6	Switch<Model Select>
MC	Motor for Compressor	TABU/V/W	Connection Terminal<U/V/W-Phase>	SW7	Switch<Function Setup>
MF1, MF2	Fan Motor	TABS/T	Connection Terminal<L/N-Phase>	SW8	Switch<Function Setup>
21S4	Solenoid Valve (Four-Way Valve)	TABP1/P2/P	Connection Terminal<DC Voltage>	SW9	Switch
63H	High Pressure Switch	TABN1/N2/N	Connection Terminal<DC Voltage>	SWP	Switch<Pump Down>
63L	Low Pressure Switch	DS2, DS3	Diode Bridge	CN31	Connector<Emergency Operation>
SV	Solenoid Valve (Bypass Valve)	IPM	Power Module	SS	Connector<Connection for Option>
TH3, TH32, TH33	Thermistor<Outdoor Pipe>	N.F.	Noise Filter Circuit Board	CNM	Connector<A-Control Service Inspection Kit>
TH4	Thermistor<Discharge>	LI / LO	Connection Terminal<L-Phase>	CNMNT	Connector
TH6	Thermistor<Outdoor 2-Phase Pipe>	NI / NO	Connection Terminal<N-Phase>		<Connected to Optional M-NET Adapter Board>
TH7	Thermistor<Outdoor>	E1, E2	Connection Terminal<Ground>	CNVMNT	Connector
TH8	Thermistor<Heatsink>	52C	52C Relay		<Connected to Optional M-NET Adapter Board>
LEV-A, LEV-B, LEV-C	Electronic Expansion Valve	C.B.	Controller Circuit Board	CNDM	Connector < Connected for Option (Contact Input)>
DCL	Reactor	SW1	Switch<Forced Defrost, Defect History Record Reset, Refrigerant Address>	CN51	Connector < Connected for Option (Signal output)>
ACTM	Active Filter Module	SW4	Switch<Test Operation>	LED1, LED2	LED<Operation Inspection Indicators>
CB	Main Smoothing Capacitor	SW5	Switch<Function Switch>	F1~F4	Fuse< T6.3A/250V>
CY1, CY2	Capacitor			X51, X52, X55	Relay



M-NET ADAPTER

SYMBOL	NAME
TB7	Terminal Block<M-net connection>
CN5	Connector<Transmission>
CND	Connector<Power Supply>
CN2M	Connector<M-NET communication>
SW1	Switch<Status of communication>
SW11	Switch<Address setting : 1s digit>
SW12	Switch<Address setting : 10s digit>
LED1	LED<Power Supply : DC5V>
LED2	LED<Connection to Outdoor Unit>
LED3	LED<Transmission : Sending>
LED4	LED<Transmission : Recelving>
LED5	LED<Power Supply : DC12V>

*1MODEL SELECT

MODEL	SW6	SW5-6 *2
30N	ON OFF ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	ON OFF ☐ ☐ ☐ ☐ ☐ ☐
36N	ON OFF ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	ON OFF ☐ ☐ ☐ ☐ ☐ ☐

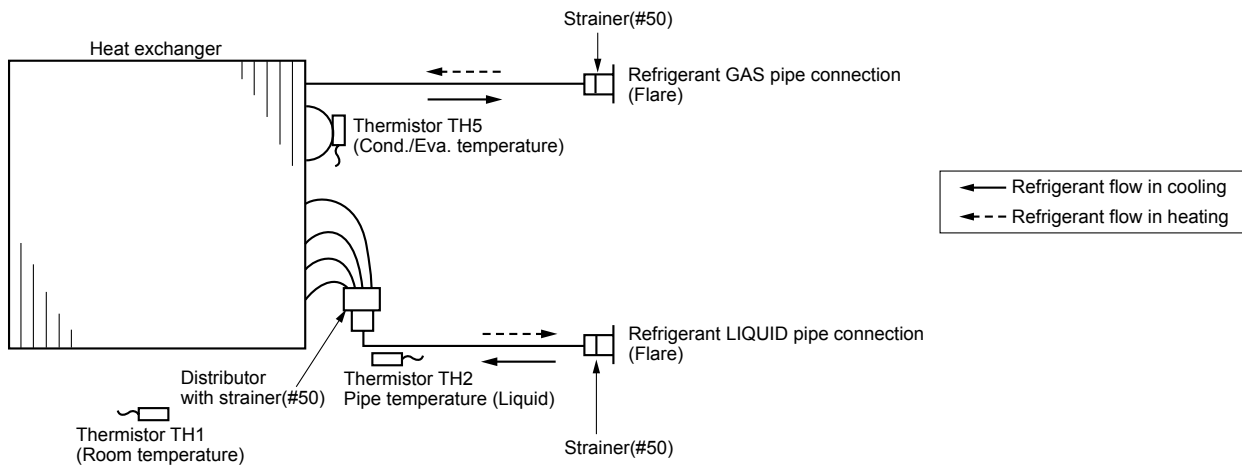
*2. SW5 -1 to 5 : Function Switch

POWER SUPPLY
208/230V 60Hz

*Use copper supply wires.

5-1. INDOOR UNIT

PLA-A·BA PCA-A·KA

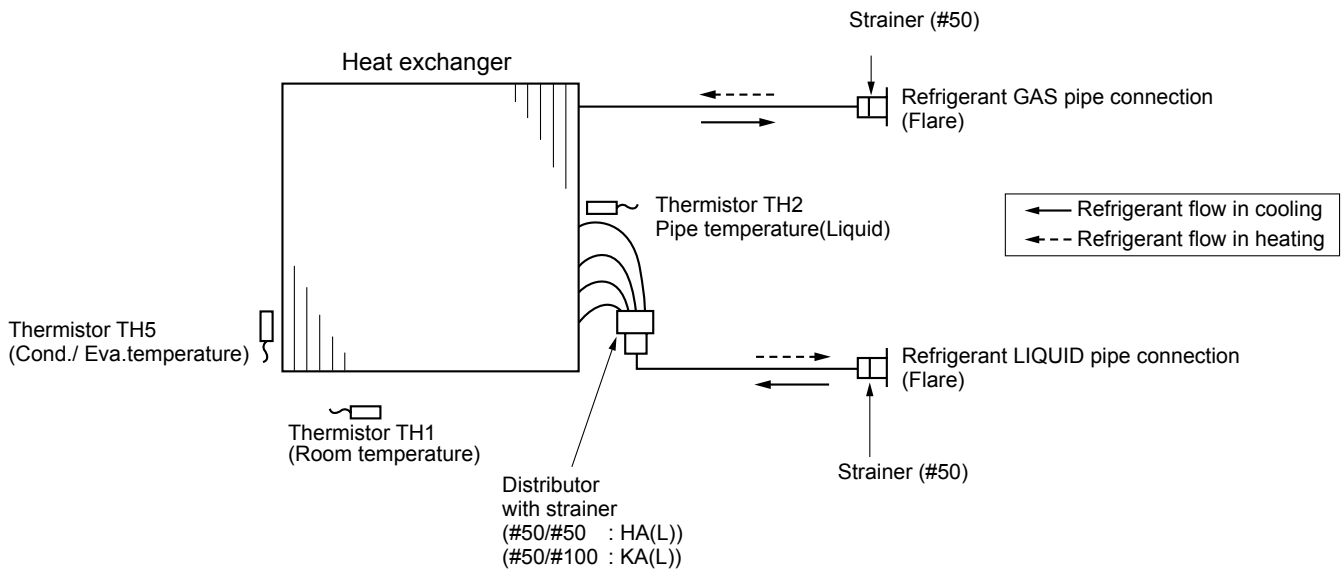


PKA-A·HA

PKA-A·HAL

PKA-A·KA

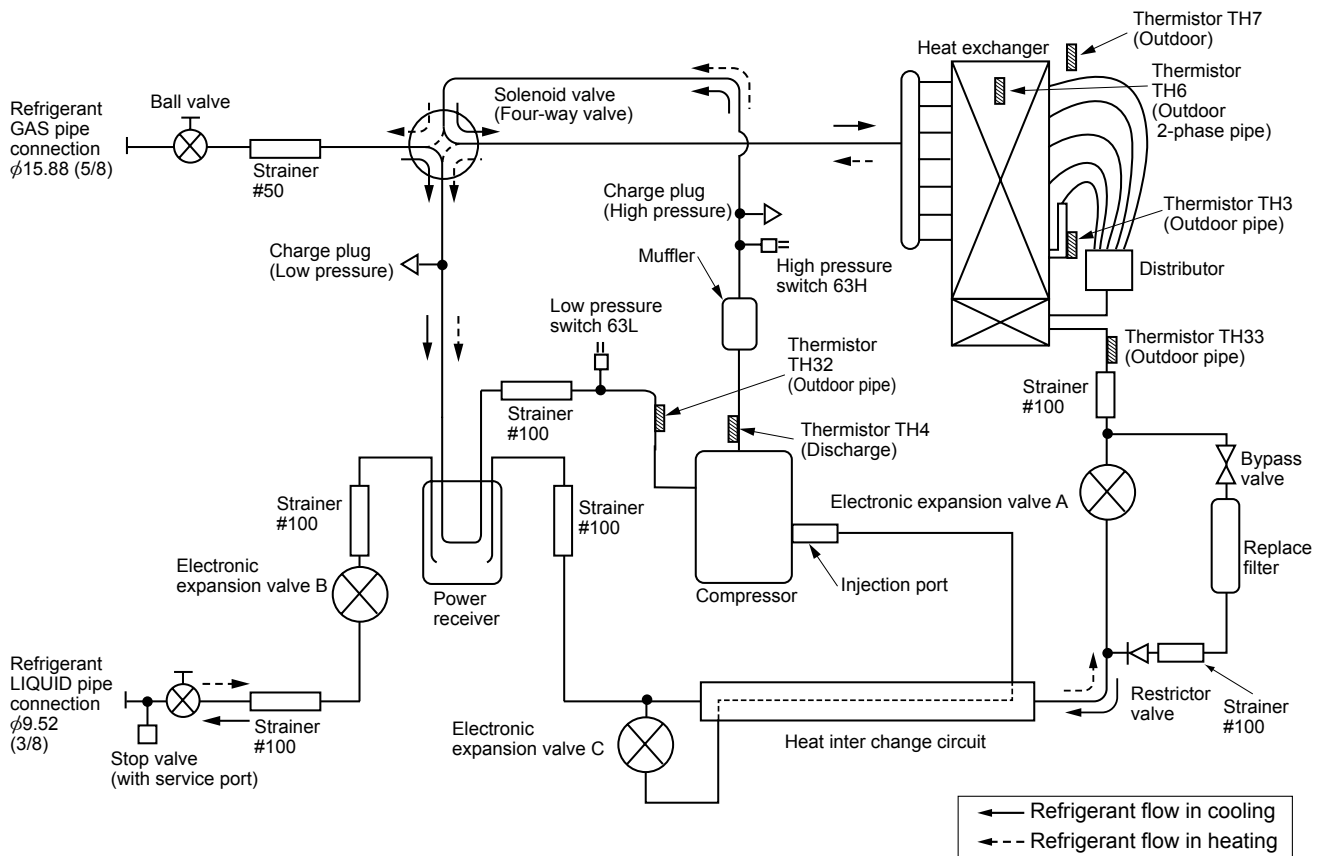
PKA-A·KAL



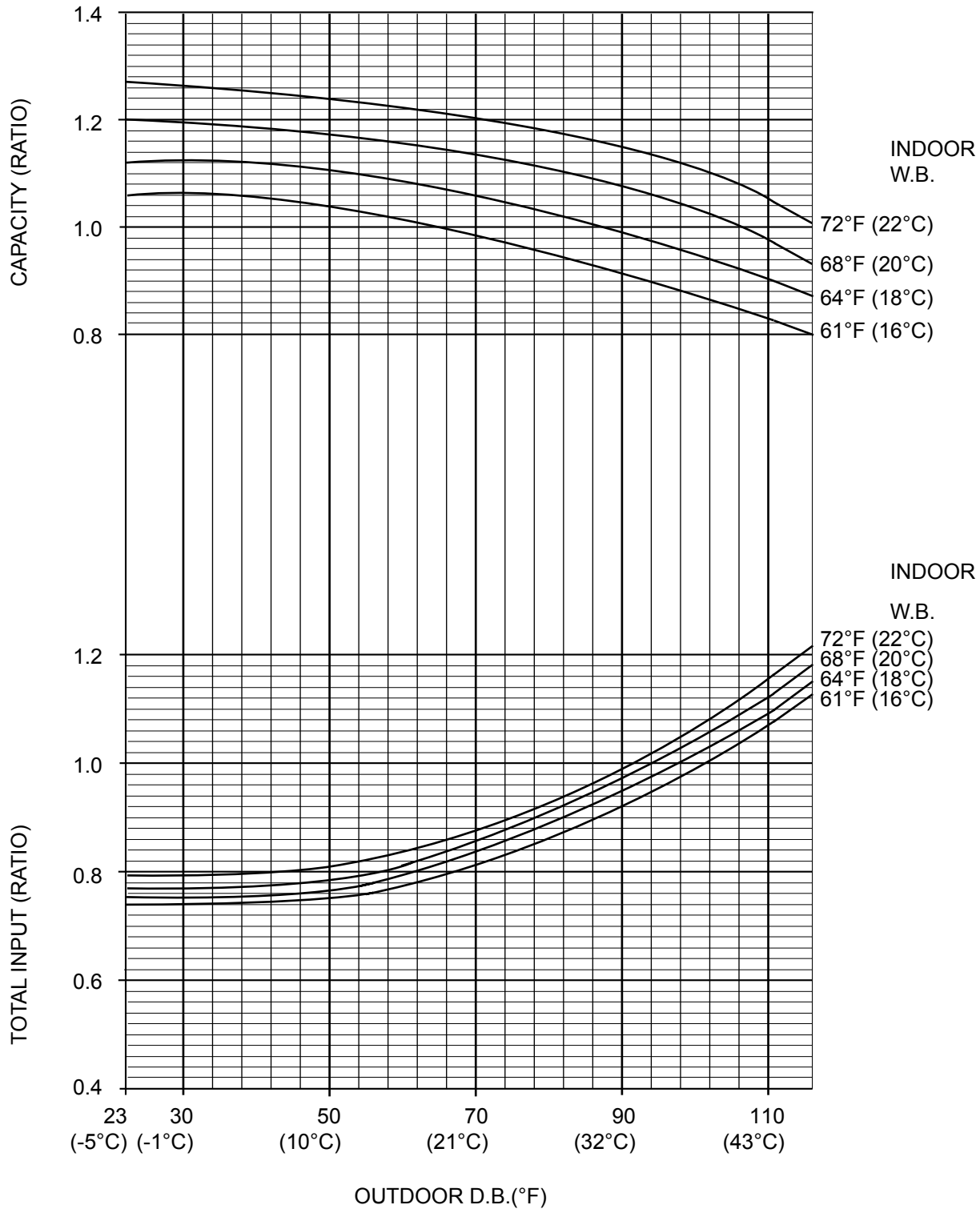
5-2. OUTDOOR UNIT

PUZ-HA30NHA2 PUZ-HA36NHA2

unit : mm (inch)



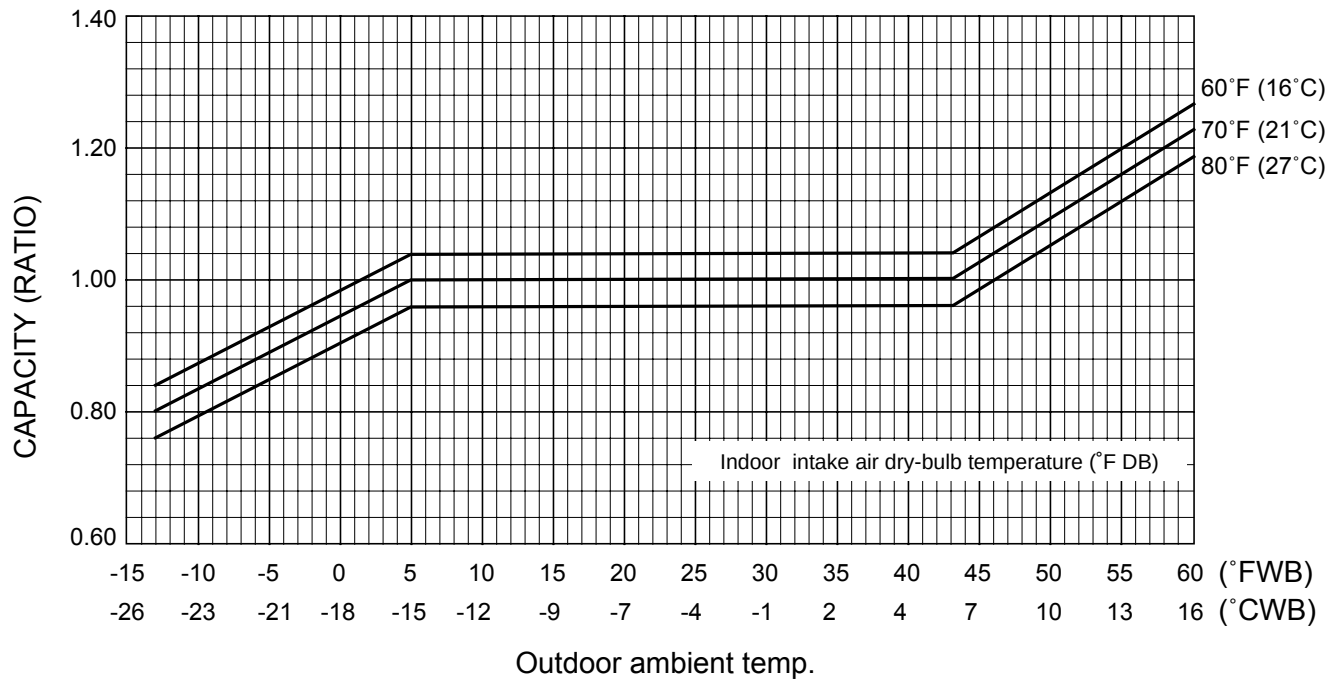
FOR THE COMBINATION OF OUTDOOR UNIT PUZ-HA-NHA2

Cooling performance curve

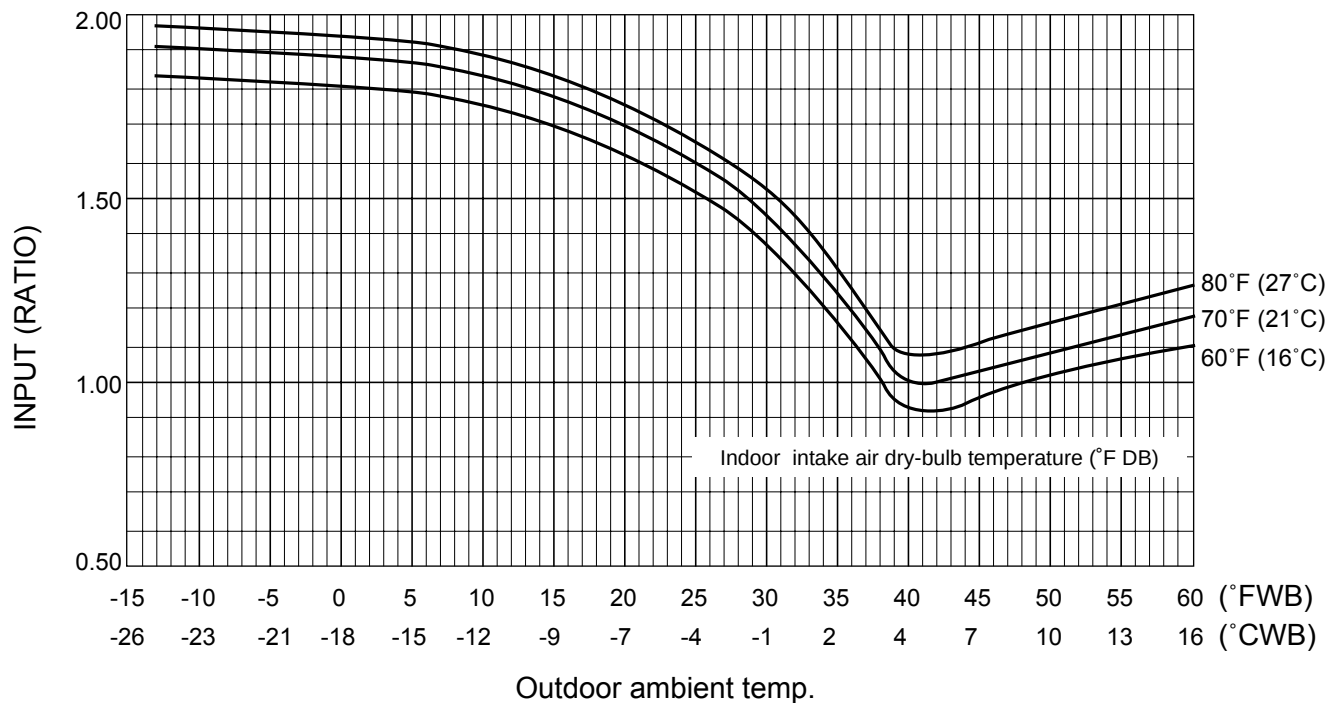
Note : This diagram shows the case where the operation frequency of a compressor is fixed.

Rated heating performance curve

Rated heating capacity



Heating input



7-1. COOLING CAPACITY CORRECTION FACTORS

Outdoor unit	Refrigerant piping length (one way)									
	5m (16ft)	10m (33ft)	20m (70ft)	30m (100ft)	40m (130ft)	50m (165ft)	55m (180ft)	60m (195ft)	70m (230ft)	80m (260ft)
PUZ-HA30NHA2 PUZ-HA36NHA2	1.00	0.985	0.957	0.931	0.908	0.886	0.876	0.865	0.846	0.829

7-2. HEATING CAPACITY CORRECTION FACTORS

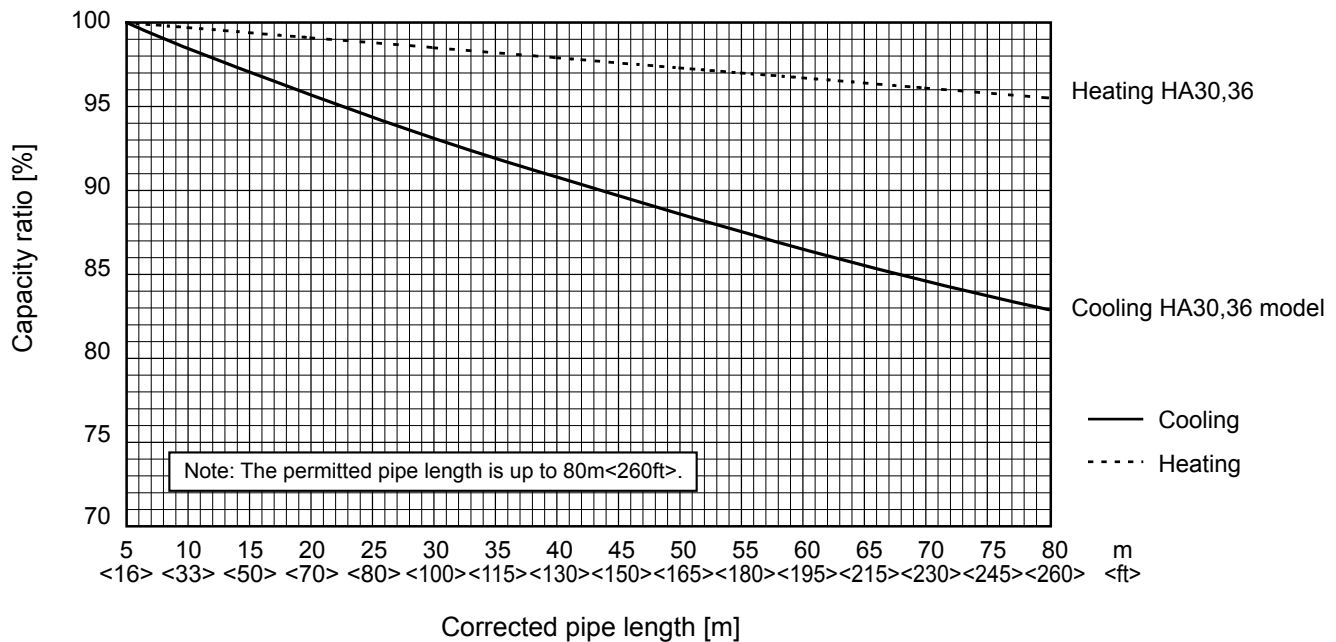
Outdoor unit	Refrigerant piping length (one way)									
	5m (16ft)	10m (33ft)	20m (70ft)	30m (100ft)	40m (130ft)	50m (165ft)	55m (180ft)	60m (195ft)	70m (230ft)	80m (260ft)
PUZ-HA30NHA2 PUZ-HA36NHA2	1.00	0.997	0.991	0.985	0.979	0.973	0.970	0.967	0.961	0.955

7-3. CAPACITY CORRECTION

Cooling and heating capacity is lowered according to pipe length. Capacity can be obtained by referring to the capacity curves below.

Corrected pipe length (m) = actual pipe length (m) + number of bends x 0.3 (m)

Corrected pipe length (ft) = actual pipe length (ft) + number of bends x 1 (ft)



When HAs pipe is one size larger than standard size, capacity can be obtained by referring to capacity curves of standard size.

7-4. ADDITION OF REFRIGERANT

- Additional charging is not necessary if the pipe length does not exceed 30 m (100 ft).
- If the pipe length exceeds the specified length above, charge the unit with additional R410A refrigerant according to the permitted pipe lengths in the chart below.
 - * When the unit is stopped, charge the unit with the additional refrigerant through the liquid stop valve after the pipe extensions and indoor unit have been vacuumized.
 - * When the unit is operating, add refrigerant to the gas check valve using a safety charger. Do not add liquid refrigerant directly to the check valve.
 - * After charging the unit with refrigerant, note the added refrigerant amount on the service label (attached to the unit).
- Be careful when installing multiple units. Connecting to an incorrect indoor unit can lead to abnormally high pressure and have a serious effect on operation performance.

Model	Max. pipe length	Max. height difference	Additional refrigerant charging amount															
			30 m 100 ft	33 m 110 ft	37 m 120 ft	40 m 130 ft	43 m 140 ft	46 m 150 ft	49 m 160 ft	52 m 170 ft	55 m 180 ft	58 m 190 ft	61 m 200 ft	64 m 210 ft	67 m 220 ft	70 m 230 ft	73 m 240 ft	75 m 245 ft
HA30,36	75 m 245 ft	30 m 100 ft	0 oz 0 kg	6 oz 0.2 kg	12 oz 0.4 kg	18 oz 0.5 kg	24 oz 0.7 kg	30 oz 0.9 kg	36 oz 1.0 kg	42 oz 1.2 kg	48 oz 1.4 kg	54 oz 1.5 kg	60 oz 1.7 kg	66 oz 1.9 kg	72 oz 2.0 kg	78 oz 2.2 kg	84 oz 2.3 kg	86 oz 2.4 kg

8-1. OUTLET AIR SPEED AND COVERAGE RANGE

		PLA-A18BA	PLA-A30BA	PLA-A36BA
Airflow	CFM	640	740	1060
Air speed	ft/sec.(m/sec.)	10.5 (3.2)	12.1 (3.7)	17.4 (5.3)
Coverage range	ft (m)	15 (4.8)	18 (5.6)	26 (8.0)

		PKA-A18HA PKA-A18HAL
Airflow	CFM	425
Air speed	ft/sec.(m/sec.)	20.0(6.1)
Coverage range	ft (m)	35(10.8)

		PKA-A30KA PKA-A30KAL	PKA-A36KA PKA-A36KAL
Airflow	CFM	775	920
Air speed	ft/sec.(m/sec.)	19.7(6.0)	22.3(6.8)
Coverage range	ft (m)	47(14.3)	53(16.1)

		PCA-A30KA	PCA-A36KA
Airflow	CFM	705	990
Air speed	ft/sec.(m/sec.)	10.5(3.2)	11.8(3.6)
Coverage range	ft (m)	33(10.1)	41(12.5)

The air coverage range is the distance to which the 0.8 ft/sec. air can reach, when air is blown out horizontally from the unit at the High notch position.

The coverage range should be used only as a general guideline since it varies according to the size of the room and the furniture inside the room.

8-2. PLA-A·BA

8-2-1 FRESH AIR INTAKE AND BRANCH DUCT

1. Branch duct hole and fresh air intake hole (Fig. 1)

At the time of installation, use the duct holes (cut out) located at the positions shown in Fig.1, as and when required.

- A fresh air intake hole for the optional multi function casement can also be made.

Note:

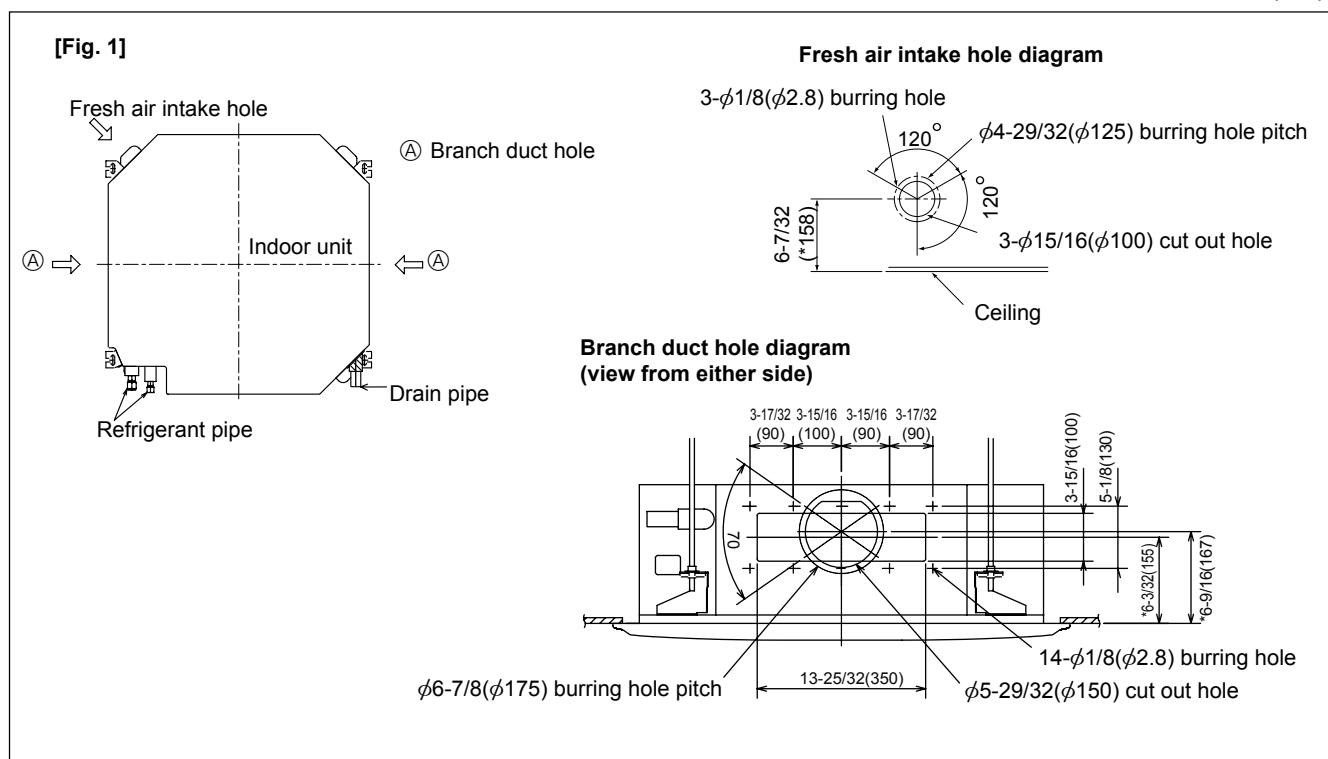
The figure marked with * in the drawing represent the dimensions of the main unit excluding those of the optional multi function casement.

When installing the optional multi function casement, add 5-5/16 to the dimensions marked on the figure.

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

Otherwise condensation and dripping may occur.

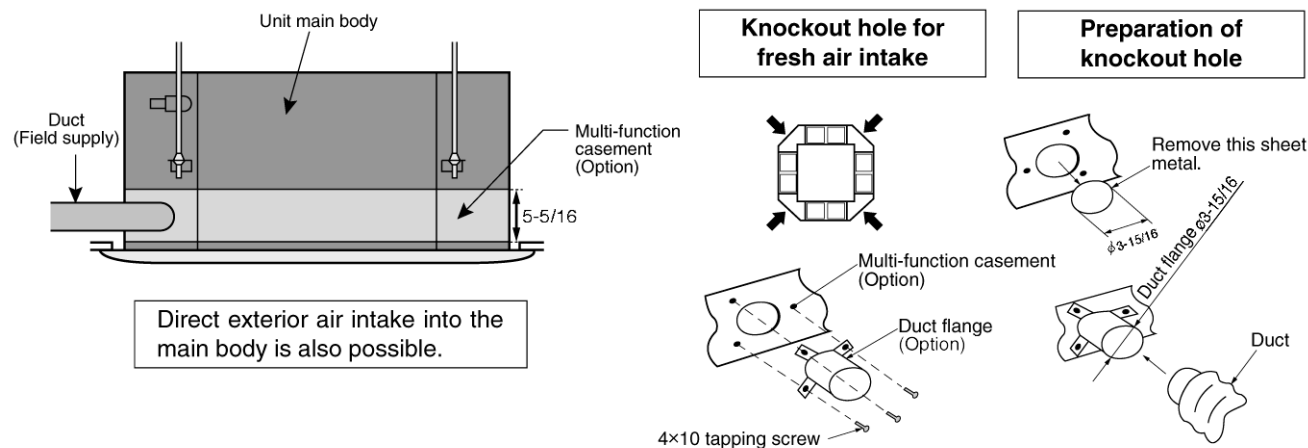
Unit : inch(mm)



2. Fresh air intake (Installation at site)

By mounting the optional multi-function casement to the indoor unit main body, and mounting the duct flange (option) onto it further, fresh exterior air intake can be accomplished.

(The mounting of the multi-function casement increases the height of the ceiling plenum by 5-5/16 (135mm).)

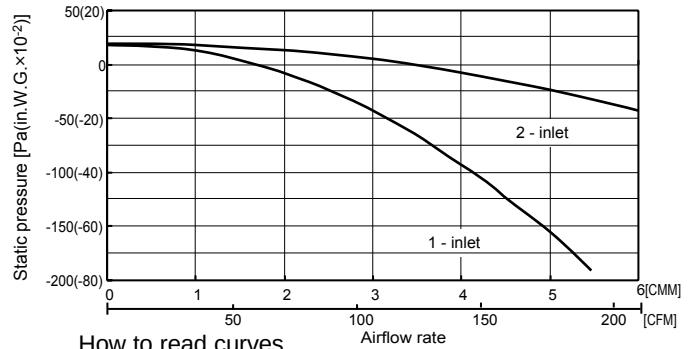
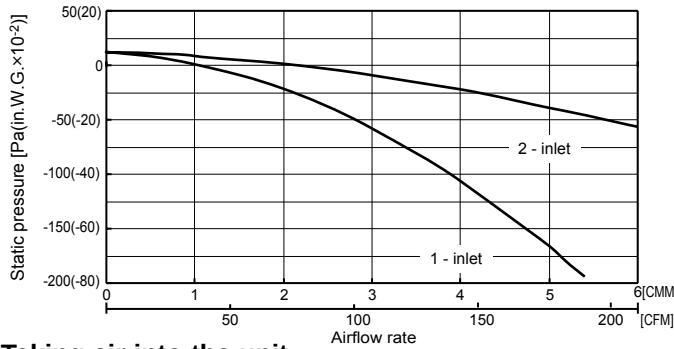


3. Fresh air intake amount & static pressure characteristics

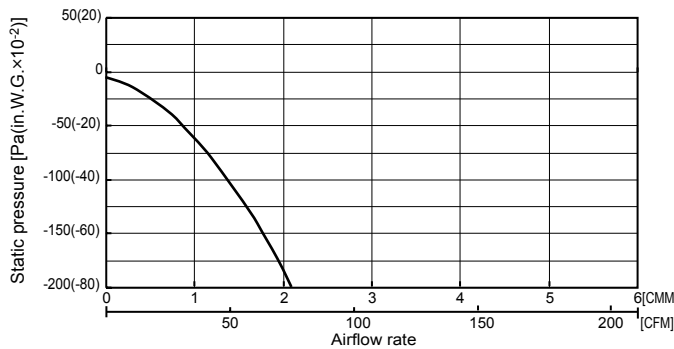
1 PLA-A18BA PLA-A30BA

Multifunction casement + High efficiency filter

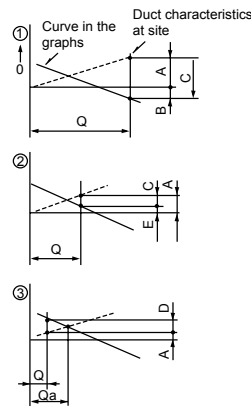
Multifunction casement + Standard filter



Taking air into the unit



How to read curves

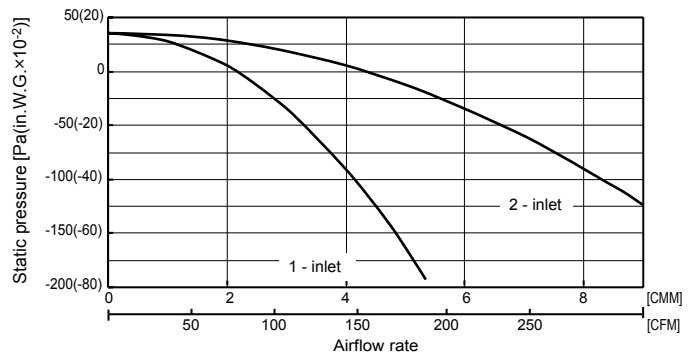
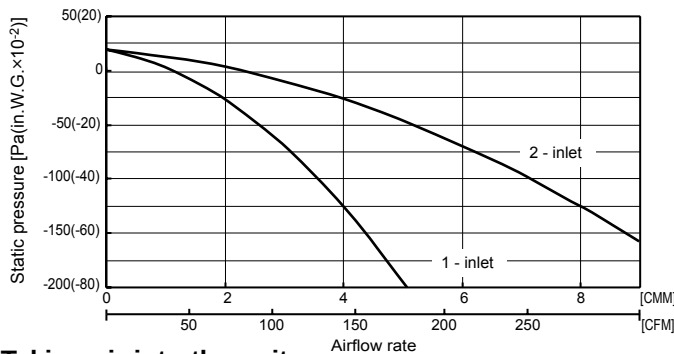


- Q...Designed amount of fresh air intake <CMM(CFM)>
- A...Static pressure loss of fresh air intake duct system with airflow amount Q <Pa(in.W.G.×10⁻²)>
- B...Forced static pressure at air conditioner inlet with airflow amount Q <Pa(in.W.G.×10⁻²)>
- C...Static pressure of booster fan with airflow amount Q <Pa(in.W.G.×10⁻²)>
- D...Static pressure loss increase amount of fresh air intake duct system for airflow amount Q <Pa(in.W.G.×10⁻²)>
- E...Static pressure of indoor unit with airflow amount Q <Pa(in.W.G.×10⁻²)>
- Qa...Estimated amount of fresh air intake without D <CMM(CFM)>

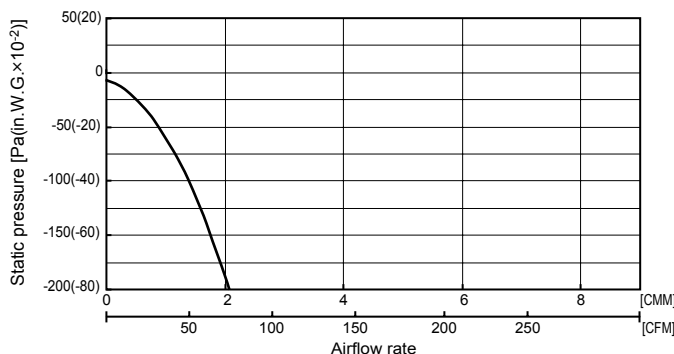
2 PLA-A36BA

Multifunction casement + Standard filter

Multifunction casement + High efficiency filter



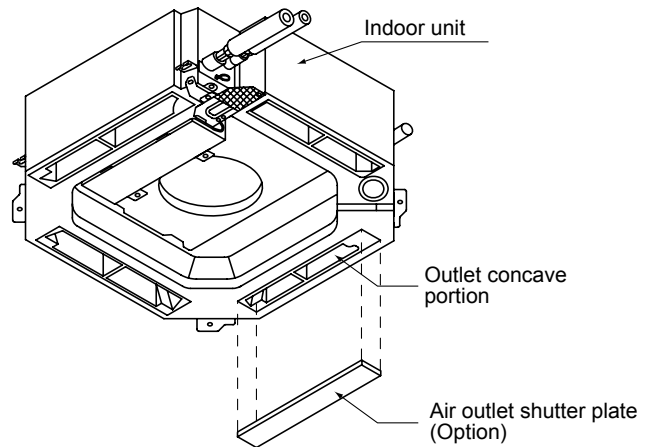
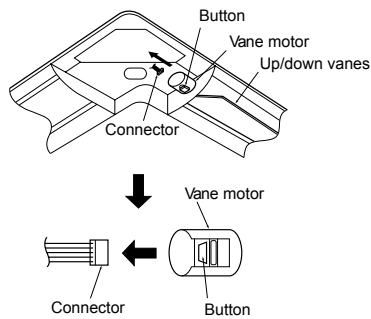
Taking air into the unit



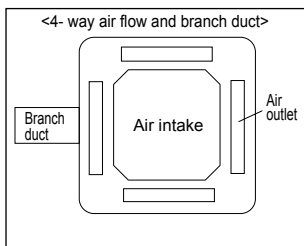
4. Change of outlet numbers

The optional air outlet is necessary.
To change the air outlet number to 3-, or 2-way outlet, the outlet number should be closed with the operational air outlet shutter.

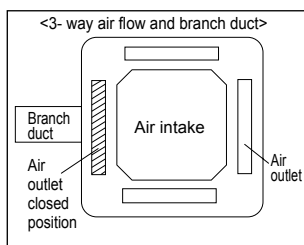
When the air outlets are closed, close the vane by removing the vane connector.



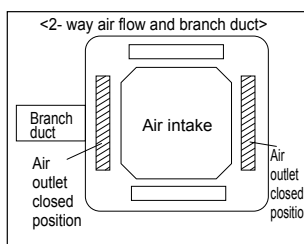
5. Branch duct and change of outlet numbers



※ Branch duct should be connected to one of the branch duct holes on the main unit.



※ Close the outlet on the side of branch duct and air flows in 3 directions.

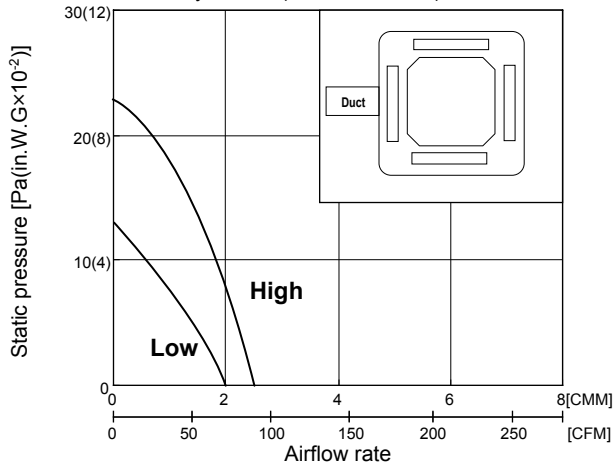


※ The outlet on the side of branch duct and one of the other outlets are closed.
Air flows in 2 directions.

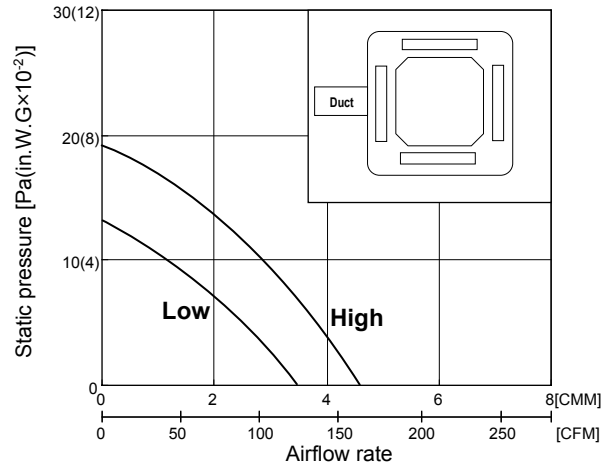
- Airflow rate of PLA-A18BA can be calculated from the airflow rate based on the characteristic of the duct for PLA-A30BA.

PLA-A30BA

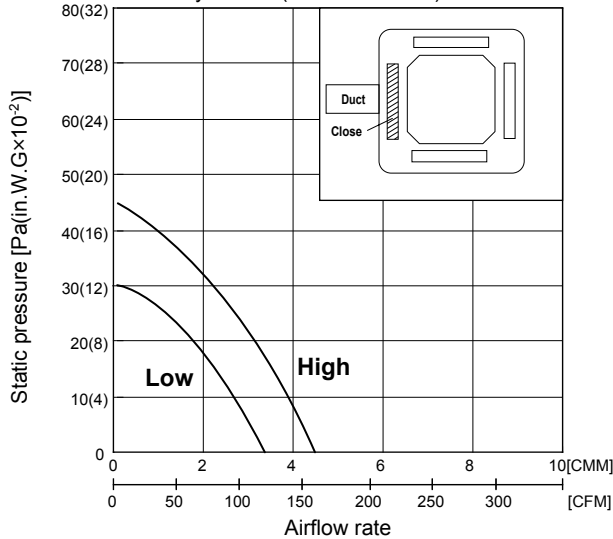
● 4-way airflow (horizontal vane) Round duct



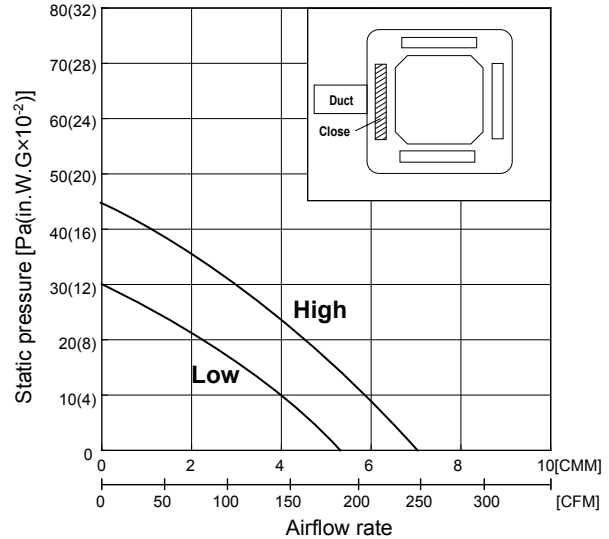
● 4-way airflow (horizontal vane) Rectangular duct



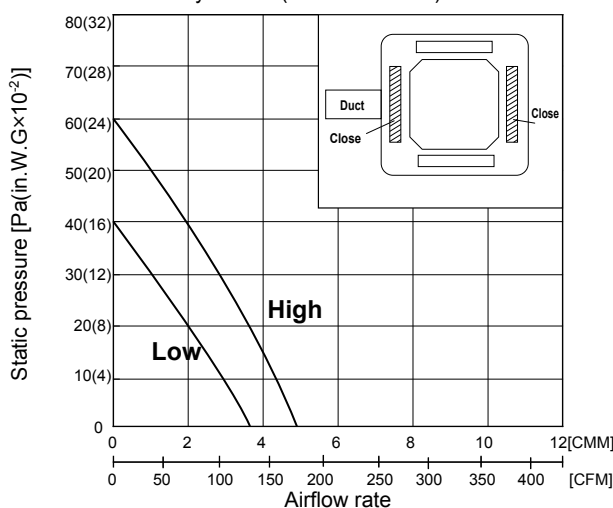
● 3-way airflow (horizontal vane) Round duct



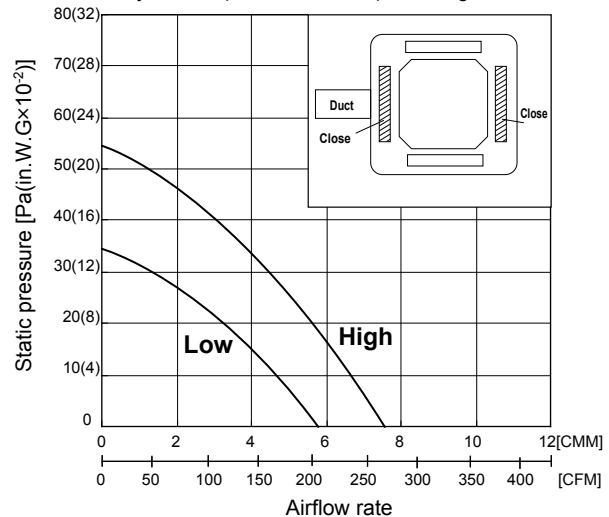
● 3-way airflow (horizontal vane) Rectangular duct



● 2-way airflow (horizontal vane) Round duct



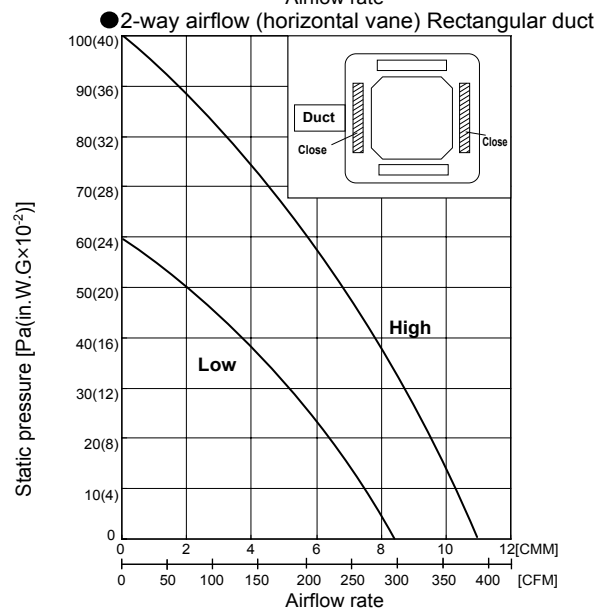
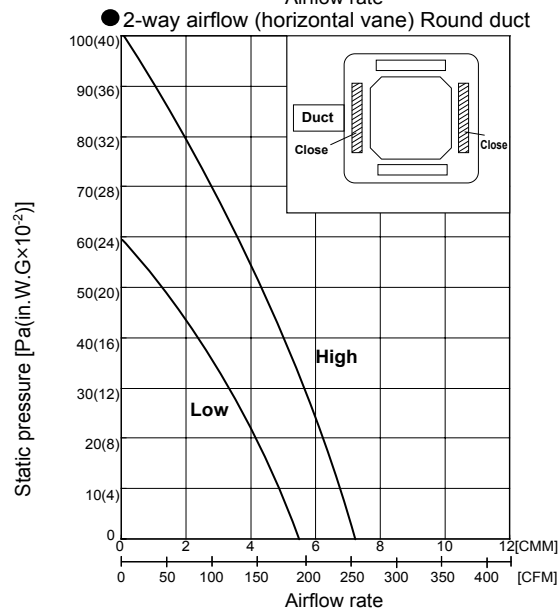
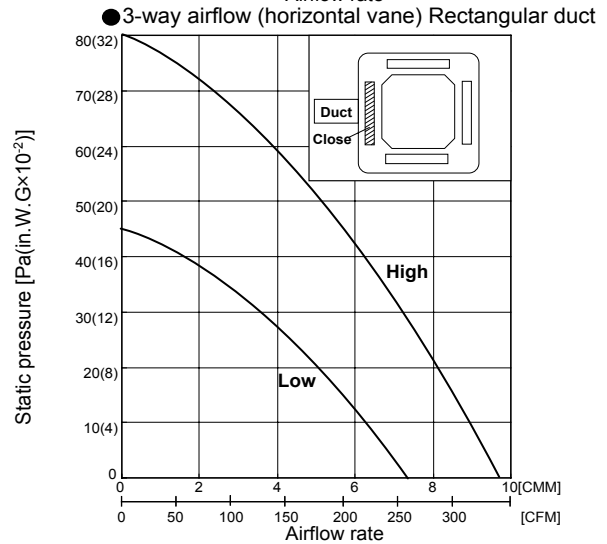
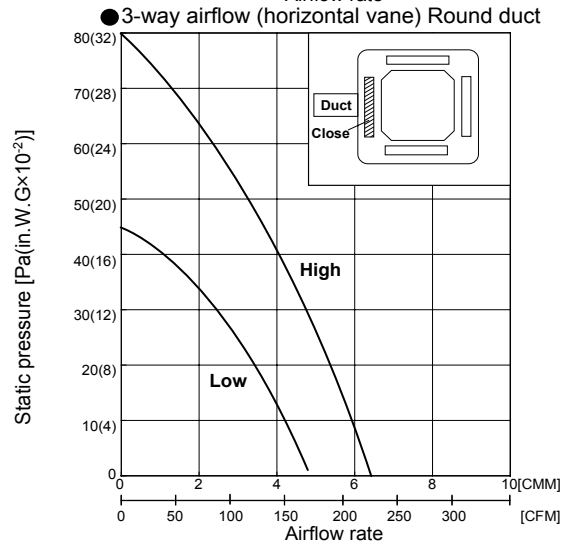
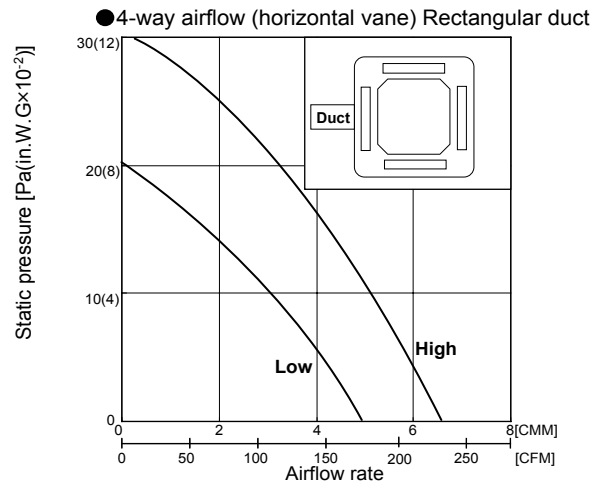
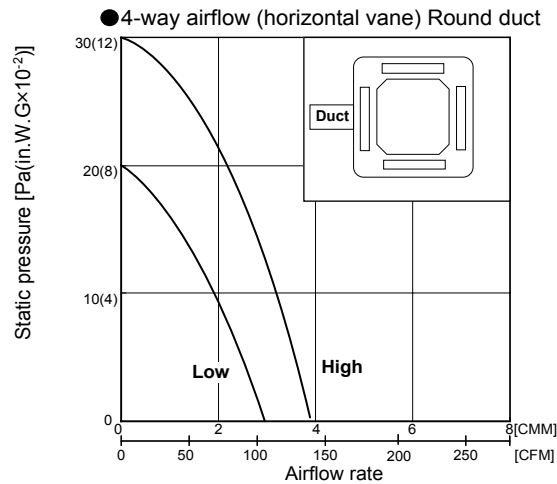
● 2-way airflow (horizontal vane) Rectangular duct



- Use 1 of the 2 duct holes on the indoor unit.
- Use the optional air outlet shutter plate (PAC-SH51SP-E) for 3-way and 2-way airflow.

- Airflow rate of PLA-A36BA can be calculated from the airflow rate based on the characteristic of the duct for PLA-A42BA.

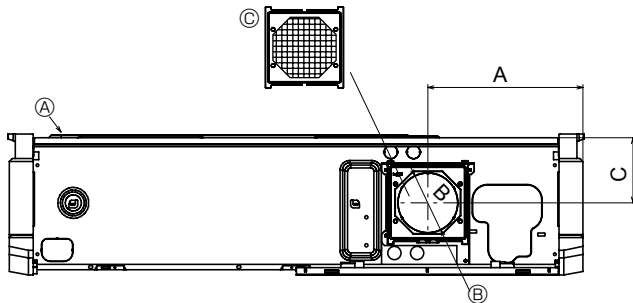
PLA-A42BA



- Use 1 of the 2 duct holes on the indoor unit.
- Use the optional air outlet shutter plate (PAC-SH51SP-E) for 3-way and 2-way airflow.

8-3. PCA-A·KA

FRESH AIR INTAKE AMOUNT & STATIC PRESSURE CHARACTERISTICS



Fresh air intake hole

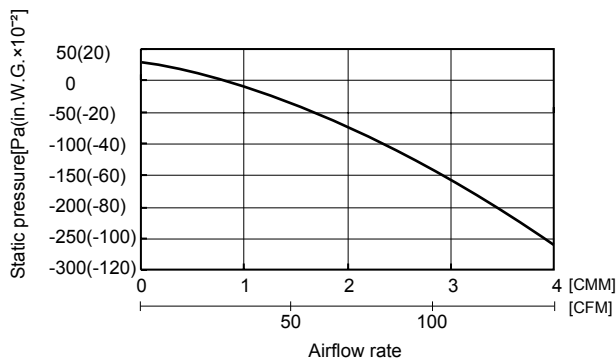
At the time of installation, use the duct holes (knock out) located at the positions shown in the left diagram, as and when required.

- Ⓐ Indoor unit
- Ⓑ Fresh air intake hole (knock out hole)
- Ⓒ Filter

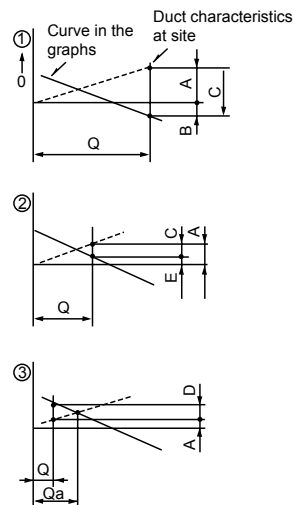
in. (mm)

A	B	C
10-3/16 (259.5)	ø 3-15/16 (ø 100)	4-5/16 (109)

■ PCA-A30KA

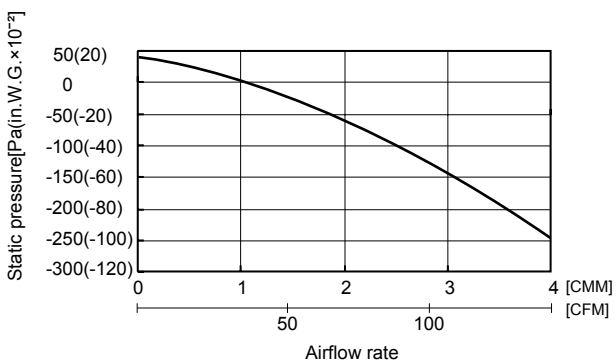


How to read curves



- Q...Designed amount of fresh air intake <CMM(CFM)>
- A...Static pressure loss of fresh air intake duct system with airflow amount Q <Pa(in.W.G.x10⁻²)>
- B...Forced static pressure at air conditioner inlet with airflow amount Q <Pa(in.W.G.x10⁻²)>
- C...Static pressure of booster fan with airflow amount Q <Pa(in.W.G.x10⁻²)>
- D...Static pressure loss increase amount of fresh air intake duct system for airflow amount Q <Pa(in.W.G.x10⁻²)>
- E...Static pressure of indoor unit with airflow amount Q <Pa(in.W.G.x10⁻²)>
- Qa...Estimated amount of fresh air intake without D <CMM(CFM)>

■ PCA-A36KA



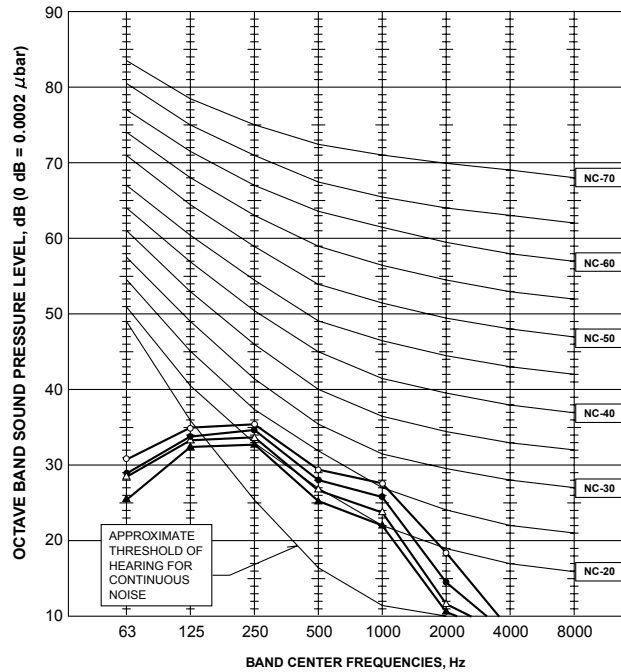
9

NOISE CRITERION CURVES

9-1. INDOOR UNIT

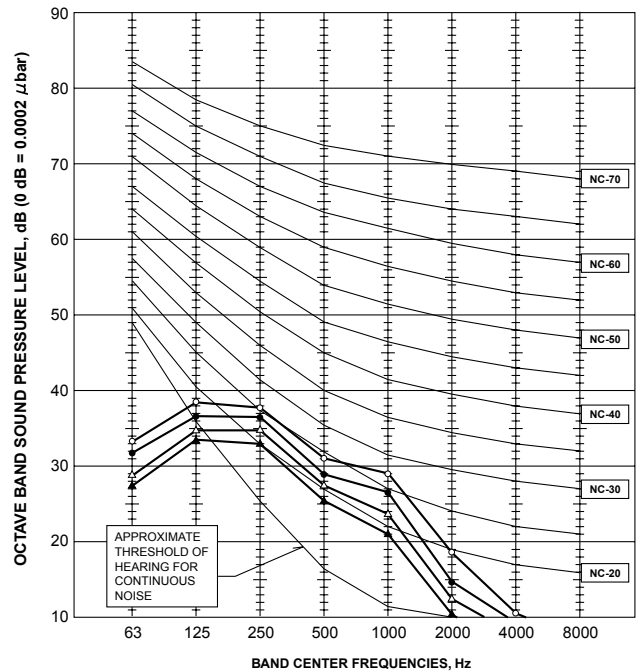
PLA-A18BA

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



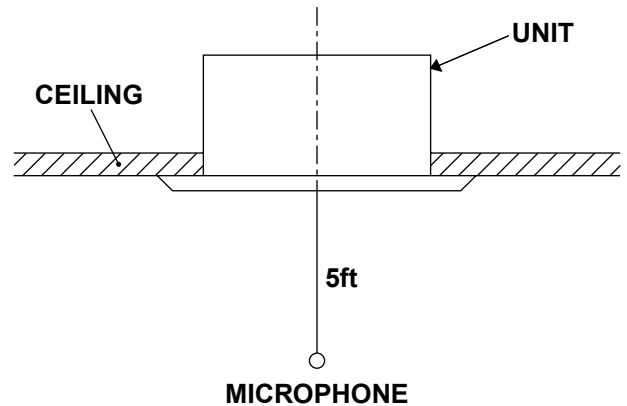
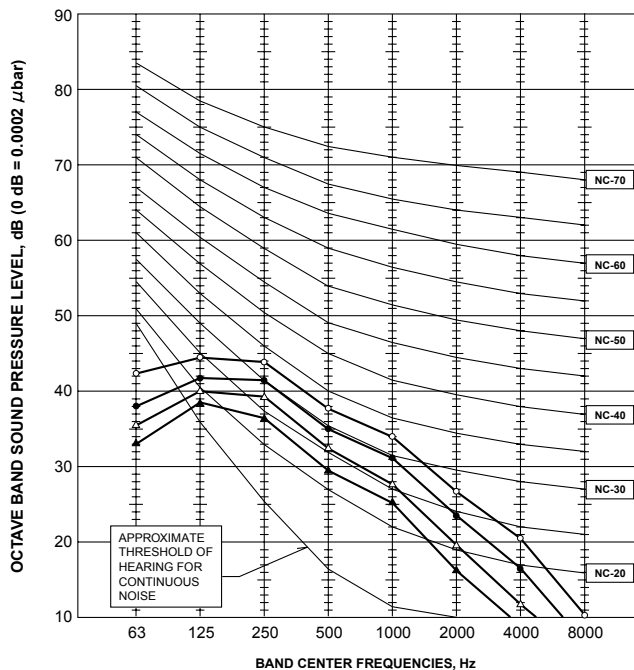
PLA-A30BA

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



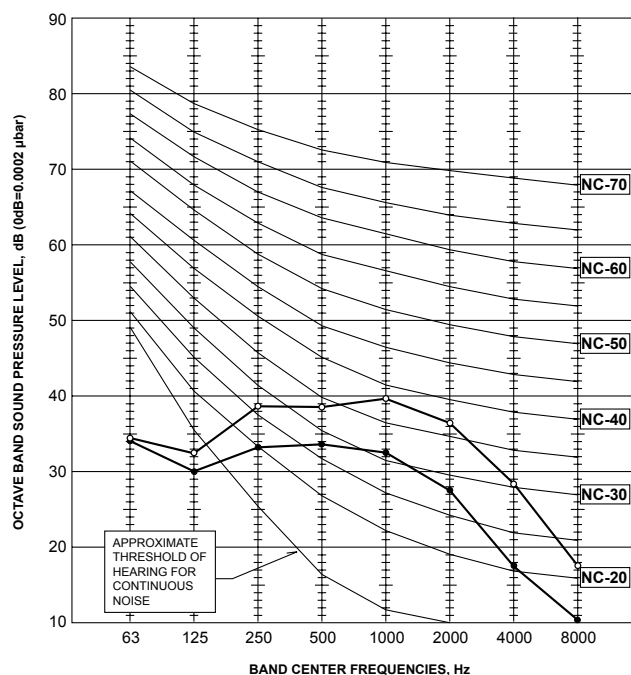
PLA-A36BA

NOTCH	SPL(dB)	LINE
High	40	○—○
Medium1	37	●—●
Medium2	34	△—△
Low	32	▲—▲



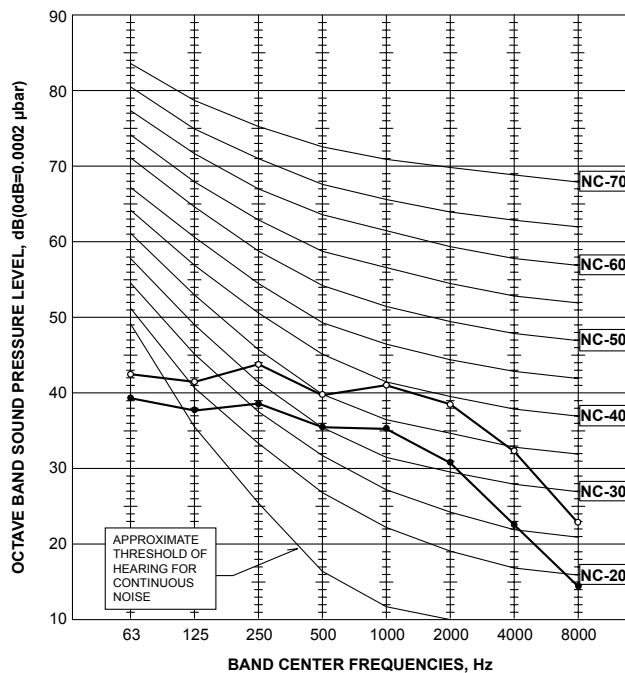
PKA-A18HA PKA-A18HAL

NOTCH	SPL(dB)	LINE
High	43	○—○
Low	36	●—●



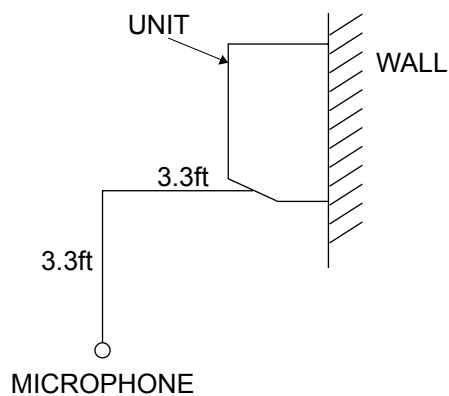
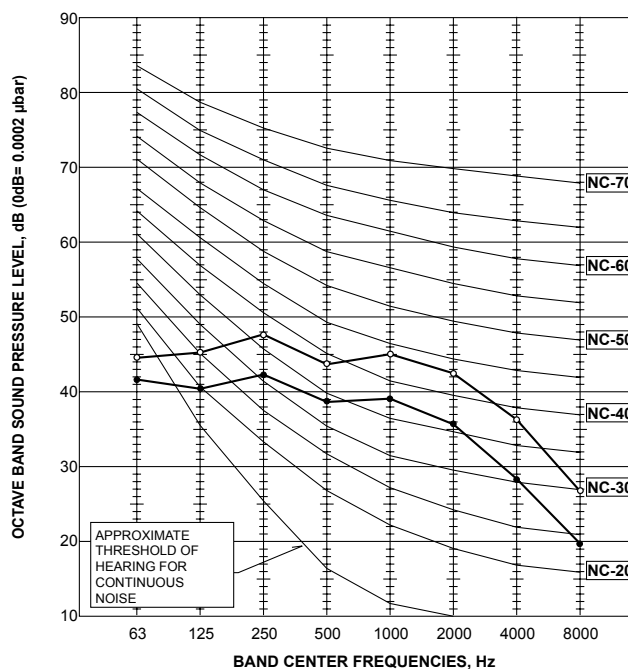
PKA-A30KA PKA-A30KAL

NOTCH	SPL(dB)	LINE
High	45	○—○
Low	39	●—●



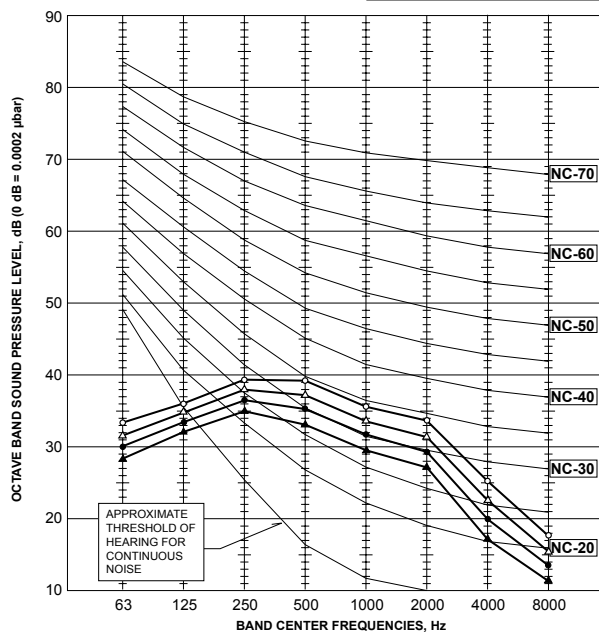
PKA-A36KA PKA-A36KAL

NOTCH	SPL(dB)	LINE
High	49	○—○
Low	43	●—●



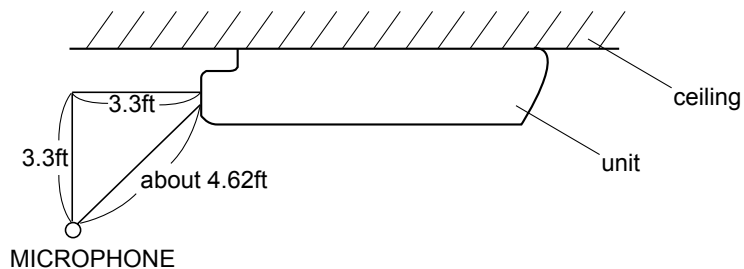
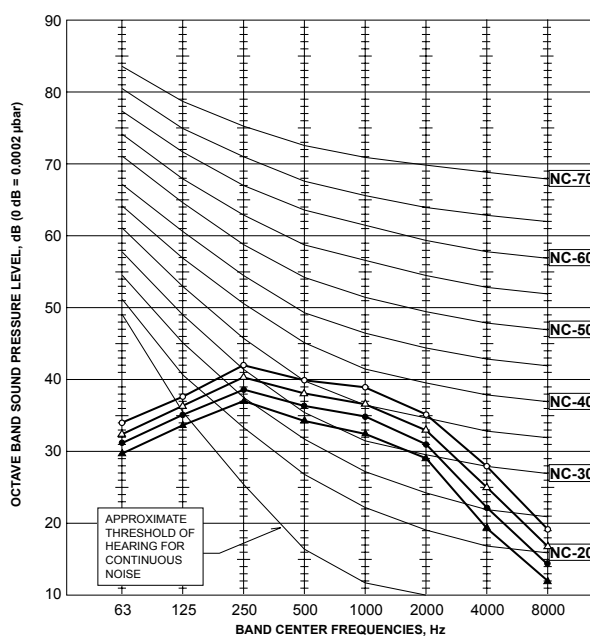
PCA-A30KA

NOTCH	SPL(dB)	LINE
High	41	○—○
Medium1	39	△—△
Medium2	37	●—●
Low	35	▲—▲



PCA-A36KA

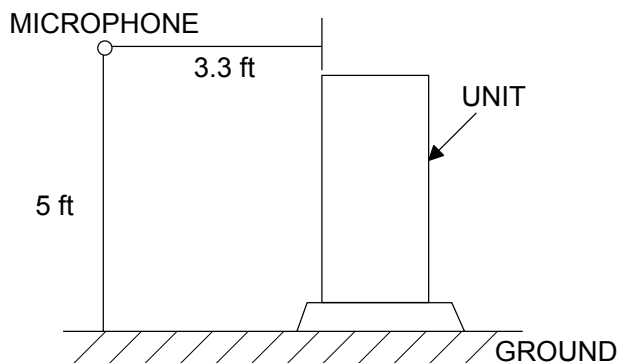
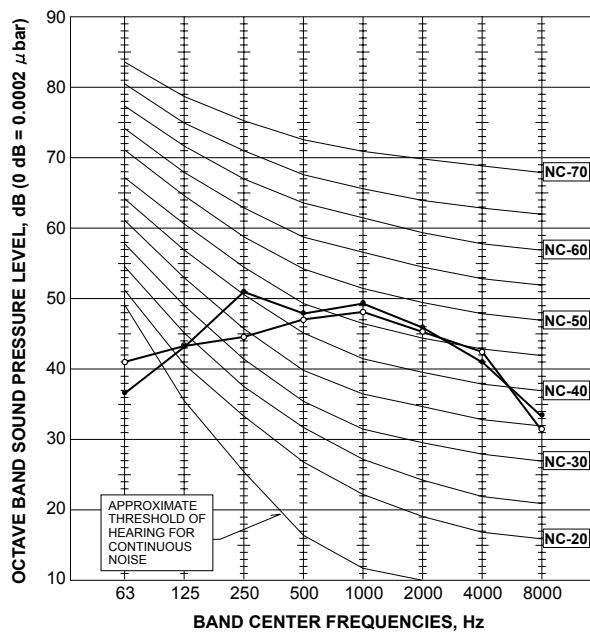
NOTCH	SPL(dB)	LINE
High	43	○—○
Medium1	41	△—△
Medium2	39	●—●
Low	37	▲—▲



9-2. OUTDOOR UNIT

PUHZ-HA30NHA2 PUHZ-HA36NHA2

MODE	SPL(dB)	LINE
COOLING	52	○—○
HEATING	53	●—●



10-1. INDOOR UNIT

Part Name	Model Name	Applicable model
Remote sensor (extensible)	PAC-SE41TS-E	All models
Connector for CN51 (output for remote display + pulse12V input)	PAC-88HA-E(1pc.) PAC-725AD(10pcs.)	
Connector for CN32 (remote ON/OFF)	PAC-SE55RA-E	
Connector for CN30 (LLC)	PAC-SE57RA-E	
Connector for CN24 (Back up heating)	PAC-SE56RA-E	
Connector for CN152 (Back up heating)	PAC-SE59RA-E	PLA-A·BA, PCA-A·KA
Power supply terminal kit	PAC-SH55HR-E	PLA-A·BA
	PAC-SG95HR-E	PKA-A·HA(L)/KA(L)
	PAC-SH98HR-E	PCA-A·KA
Decoration panel with Wired remote controller	PLP-42BAMD	PLA-A·BA
Decoration panel	PLP-40BAU	
Multi-function casement	PAC-SH53TM-E	
Flange for fresh air intake	PAC-SH65OF-E	
High-efficiency filter element (PAC-SH53TM-E is needed.)	PAC-SH59KF-E	
i-see sensor corner panel	PAC-SA1ME-E	
Wireless signal receiver	PAR-SA9FA-E	
Wireless remote controller kit	PAR-SW96U-E	
Space panel	PAC-SH48AS-E	
Air outlet shutter plate	PAC-SH51SP-E	
High efficiency filter	PAC-SH89KF-E	PCA-A30KA
	PAC-SH90KF-E	PCA-A36KA
Drain lift up mechanism	PAC-SH84DM-E	PCA-A·KA
i-see Sensor	PAC-SH91MK-E	
Wireless remote controller kit with i-see Sensor	PAR-SA92MW-E	
Wireless remote controller kit	PAR-SL93B-E	

10-2. OUTDOOR UNIT FOR PUZ-HA30/36NHA2

Part Name	Model Name
M-NET adapter	PAC-SF80MA-E
A-control service tool	PAC-SK52ST
Drain socket	PAC-SG61DS-E
Air outlet guide (HA30/36 needs 2 pieces.)	PAC-SG59SG-E
Air protect guide (HA30/36 needs 2 pieces.)	PAC-SH63AG-E
Drain pan	PAC-SG64DP-E
Distribution pipe for twin use	MSDD-50SR-E



HEAD OFFICE : TOKYO BLDG., 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN