

TECHNICAL CATALOGUE

HITACHI

Cooling & Heating



MULTIZONE

OUTDOOR UNIT
RAM-G18N2HAA
RAM-G24N3HAA
RAM-G36N4HAA

INDOOR
RAK-DJ07QHAA
RAK-DJ(09-24)RHAA
RAK-GJ(07-24)QHAA
RAF-FJ(07-18)QHAA
RAI-GJ(07-24)QHAA
RAD-GJ(07-24)QHAA

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1 SPECIFICATIONS

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1.1. MULTIZONE INDOOR

1.1.1. WALL TYPE (RAK-DJ07QHAA/RAK-DJ09RHAA/RAK-DJ12RHAA)

INDOOR	Unit	RAK-DJ07QHAA	RAK-DJ09RHAA	RAK-DJ12RHAA
Nominal capacity adjustable		no	no	no
Nominal Cooling capacity (min - max)	BTU	7000(3050-9000)	9000(5450~10500)	12000(5500~13200)
Cooling sensible capacity	BTU	-	-	-
Nominal Heating capacity (min - max)	BTU	9000(3050-10900)	10500(4200~11500)	13000(4400~14500)
Noise level cooling (sound pressure)(S/L/M/H/HIHI)	dB(A)	29/36/40/42/44	29/36/40/42/44	29/36/40/44/46
Noise level heating (sound pressure)(S/L/M/H/HIHI)	dB(A)	29/36/40/42/44	29/36/40/42/44	29/36/40/44/46
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	56	56	58
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m³/h)	110/150/180/250/260	110/150/180/250/260	140/190/230/280/290
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m³/h)	130/180/210/230/310	110/150/180/250/260	140/170/200/260/280
Fan Motor	W	38	38	38
Dehumidification	l/h	1.0	1.4	1.6
Included drain pump *for RAI/RAD	yes/no	no	no	no
Max. height available for drain pump (RAD/RAI only)	in. (mm)	no	no	no
Drain pump pressure lift *for RAI/RAD	in. (mm)	no	no	no
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no	no
Dimensions (H x W x D)	in. (mm)	30.71x11.02x8.74 (780x280x222)	30.71x11.02x8.74 (780x280x222)	30.71x11.02x8.74 (780x280x222)
Weight *must match with Packing data information	lbs. (kg)	21.5 (9.7)	21.5 (9.7)	21.5 (9.7)
Panel weight *for RAI	lbs. (kg)	-	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-	-
Colour (Munsell Code)				
Condensate Drain	in. (mm)	-	-	-
Panel reference		-	-	-
Color of the panel (RAL)		-	-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 3/8"
Drain diameter (ext)	in. (mm)	0.63(16)	0.63(16)	0.63(16)
Remote control (standard/optional) *	Standard	RC-AGU1EA0N	RC-AGU1EA0N	RC-AGU1EA0N
	Optional	-	-	-
Filter				
ACL Filter Standard (Material & Accessory code)		-	-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-	-
ACL Filter Optional (Material - Accessory code)		-	-	-
Pre-filter Standard Material		Stainless pre-filter	Stainless pre-filter	Stainless pre-filter
Pre-filter Optional (Material & Accessory code)		-	-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F

Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m)
dB: Dry Bulb; WB: Wet Bulb

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

1.1.2. WALL TYPE (RAK-DJ18RHAA / RAK-DJ24RHAA)

INDOOR	Unit	RAK-DJ18RHAA	RAK-DJ24RHAA
Nominal capacity adjustable		no	no
Nominal Cooling capacity (min - max)	BTU	17600(5700~18600)	24000(8200~25200)
Cooling sensible capacity	BTU	-	-
Nominal Heating capacity (min - max)	BTU	19000(6700~20500)	25000(8300~26500)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	35/38/42/46/48	35/40/45/49/51
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	35/38/42/46/48	35/40/45/49/51
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	62	65
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m ³ /h)	240/270/360/390/420	310/350/460/550/580
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m ³ /h)	210/270/300/360/380	320/390/490/530/550
Fan Motor	W	30	38
Dehumidification	l/h	2.9	3.4
Included drain pump *for RAI/RAD	yes/no	no	no
Max. height available for drain pump (RAD/RAI only)	in. (mm)	no	no
Drain pump pressure lift *for RAI/RAD	in. (mm)	no	no
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no
Dimensions (H x W x D)	in. (mm)	37.40x11.57x9.06 (950x294x230)	41.34x11.57x10.04 (1050x294x255)
Weight *must match with Packing data information	lbs. (kg)	27.6 (12.5)	30.9 (14.0)
Panel weight *for RAI	lbs. (kg)	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-
Colour (Munsell Code)			
Condensate Drain	in. (mm)	-	-
Panel reference		-	-
Color of the panel (RAL)		-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm ²	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 1/2"	1/4" / 5/8"
Drain diameter (ext)	in. (mm)	0.63(16)	0.63(16)
Remote control (standard/optional) *	Standard	RC-AGU1EA0N	RC-AGU1EA0N
	Optional	-	-
Filter			
ACL Filter Standard (Material & Accessory code)		-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-
ACL Filter Optional (Material - Accessory code)		-	-
Pre-filter Standard Material		Stainless pre-filter	Stainless pre-filter
Pre-filter Optional (Material & Accessory code)		-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F

Piping Length: 24-39/64ft (7.5m); **Piping Lift:** 0ft (0m)
dB: Dry Bulb; **WB:** Wet Bulb

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

1.1.3. WALL TYPE (RAK-GJ07QHAA / RAK-GJ09QHAA /RAK-GJ12QHAA)

INDOOR	Unit	RAK-GJ07QHAA	RAK-GJ09QHAA	RAK-GJ12QHAA
Nominal capacity adjustable		no	no	no
Nominal Cooling capacity (min - max)	BTU	7000(3050-9000)	9000(5100~10500)	12000(5150~14000)
Cooling sensible capacity	BTU	-	-	-
Nominal Heating capacity (min - max)	BTU	9000(3050-10900)	11000(5450~15000)	14000(5500~18000)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	27/35/39/41/44	27/35/39/41/44	27/35/40/43/46
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	27/35/39/41/43	27/35/39/41/43	27/35/40/43/46
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	57	57	60
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m³/h)	206/288/335/388/430	206/288/335/388/430	206/288/335/430/470
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m³/h)	214/303/347/400/441	214/303/347/400/441	214/303/347/444/482
Fan Motor	W	30	30	30
Dehumidification	l/h	1.0	1.0	1.5
Included drain pump *for RAI/RAD	yes/no	no	no	no
Max. height available for drain pump (RAD/RAI only)	in. (mm)	no	no	no
Drain pump pressure lift *for RAI/RAD	in. (mm)	no	no	no
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no	no
Dimensions (H x W x D)	in. (mm)	11-9/16 x 37-13/32 x 9-1/4 (294x950x235)	11-9/16 x 37-13/32 x 9-1/4 (294x950x235)	11-9/16 x 37-13/32 x 9-1/4 (294x950x235)
Weight *must match with Packing data information	lbs. (kg)	24 (11)	24 (11)	24 (11)
Panel weight *for RAI	lbs. (kg)	-	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-	-
Colour (Munsell Code)				
Condensate Drain	in. (mm)	-	-	-
Panel reference		-	-	-
Color of the panel (RAL)		-	-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 3/8"
Drain diameter (ext)	in. (mm)	0.63(16)	0.63(16)	0.63(16)
Remote control (standard/optional) *	Standard	RC-AGS1EA0N	RC-AGS1EA0N	RC-AGS1EA0N
	Optional	-	-	-
Filter				
ACL Filter Standard (Material & Accessory code)		-	-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-	-
ACL Filter Optional (Material - Accessory code)		-	-	-
Pre-filter Standard Material		Stainless pre-filter	Stainless pre-filter	Stainless pre-filter
Pre-filter Optional (Material & Accessory code)		-	-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F
Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m) dB: Dry Bulb; WB: Wet Bulb			

1.1.4. WALL TYPE (RAK-GJ18QHAA / RAK-GJ24QHAA)

INDOOR	Unit	RAK-GJ18QHAA	RAK-GJ24QHAA
Nominal capacity adjustable		no	no
Nominal Cooling capacity (min - max)	BTU	18000(6600~20500)	22000(9700~25000)
Cooling sensible capacity	BTU	-	-
Nominal Heating capacity (min - max)	BTU	21500(7100~26000)	25000(8500~29500)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	35/42/45/47/49	39/45/48/53/58
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	35/42/45/47/49	39/45/48/53/58
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	63	65
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m ³ /h)	265/388/471/559/618	265/353/470/588/676
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m ³ /h)	276/397/480/568/633	279/279/480/601/689
Fan Motor	W	38	38
Dehumidification	l/h	1.8	2.5
Included drain pump *for RAI/RAD	yes/no	no	no
Max. height available for drain pump (RAD/RAI only)	in. (mm)	no	no
Drain pump pressure lift *for RAI/RAD	in. (mm)	no	no
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no
Dimensions (H x W x D)	in. (mm)	(294 x 1050 x 255)	(300x1100x273)
Weight *must match with Packing data information	lbs. (kg)	30.9 (14.0)	37.5 (17.0)
Panel weight *for RAI	lbs. (kg)	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-
Colour (Munsell Code)			
Condensate Drain	in. (mm)	-	-
Panel reference		-	-
Color of the panel (RAL)		-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm ²	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 1/2"	1/4" / 5/8"
Drain diameter (ext)	in. (mm)	0.63(16)	0.63(16)
Remote control (standard/optional) *	Standard	RC-AGS1EA0N	RC-AGS1EA0N
	Optional	-	-
Filter			
ACL Filter Standard (Material & Accessory code)		-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-
ACL Filter Optional (Material - Accessory code)		-	-
Pre-filter Standard Material		Stainless pre-filter	Stainless pre-filter
Pre-filter Optional (Material & Accessory code)		-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F

Piping Length: 24-39/64ft (7.5m); **Piping Lift:** 0ft (0m)
dB: Dry Bulb; **WB:** Wet Bulb

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

1.1.5. FLOOR TYPE (RAF-FJ07QHAA / RAF-FJ09QHAA/ RAF-FJ12QHAA / RAF-FJ18QHAA)

INDOOR	Unit	RAF-FJ07QHAA	RAF-FJ09QHAA	RAF-FJ12QHAA	RAF-FJ18QHAA
Nominal capacity adjustable		no	no	no	no
Nominal Cooling capacity (min - max)	BTU	7000(3050-9000)	9000(3050-10600)	12000(3050-13650)	18000(3050-17750)
Cooling sensible capacity	BTU	-	-	-	-
Nominal Heating capacity (min - max)	BTU	9000(3050-10900)	11600(3050-15000)	15350(3050-18000)	20500(3050-27600)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	22/26/31/36/38	22/26/31/36/38	22/26/31/38/39	23/29/36/41/43
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	22/26/31/36/38	22/26/31/36/38	23/26/31/38/41	26/29/36/43/44
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	52	52	53	57
Air flow cooling mode (SL / L / M / H / Rapid)	cfm (m³/h)	160.7/232.1/303.6/345.2/375 (270/390/510/582/630)	160.7/232.1/303.6/345.2/375 (270/390/510/582/630)	160.7/232.1/303.6/345.2/375 (270/390/510/582/630)	178.6/267.9/321.4/386.9/416.7 (300/450/540/648/702)
Air flow heating mode (SL / L / M / H / Rapid)	cfm (m³/h)	178.6/250/321.4/357.1/392.9 (300/420/540/600/660)	178.6/250/321.4/357.1/392.9 (300/420/540/600/660)	178.6/250/321.4/357.1/392.9 (300/420/540/600/660)	196.4/285.7/339.3/404.8/434.5 (330/480/570/678/732)
Fan Motor	W	38	38	38	38
Dehumidification	l/h	1.2	1.4	1.9	2
Included drain pump *for RAI/RAD	yes/no	no	no	no	no
Max. height available for drain pump (RAD/RAI only)	in. (mm)	no	no	no	no
Drain pump pressure lift *for RAI/RAD	in. (mm)	no	no	no	no
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no	no	no
Dimensions (H x W x D)	in. (mm)	29.5×23.2×8.6 (750 × 590 × 219)	29.5×23.2×8.6 (750 × 590 × 219)	29.5×23.2×8.6 (750 × 590 × 219)	29.5×23.2×8.6 (750 × 590 × 219)
Weight *must match with Packing data information	lbs. (kg)	32.4(14.7)	32.4(14.7)	32.4(14.7)	32.4(14.7)
Panel weight *for RAI	lbs. (kg)	-	-	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-	-	-
Colour (Munsell Code)		ShadowWhite (5PB8.7/0.5)	ShadowWhite (5PB8.7/0.5)	ShadowWhite (5PB8.7/0.5)	ShadowWhite (5PB8.7/0.5)
Condensate Drain	in. (mm)	0.63(16)	0.63(16)	0.63(16)	0.63(16)
Panel reference		-	-	-	-
Color of the panel (RAL)		-	-	-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 3/8"	1/4" / 1/2"
Drain diameter (ext)	in. (mm)	0.63(16)	0.63(16)	0.63(16)	0.63(16)
Remote control (standard/optional) *	Standard	RC-BGH1FB0N	RC-BGH1FB0N	RC-BGH1FB0N	RC-BGH1FB0N
	Optional	RC-BGH1FD0N	RC-BGH1FD0N	RC-BGH1FD0N	RC-BGH1FD0N
Filter					
ACL Filter Standard (Material & Accessory code)		-	-	-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-	-	-
ACL Filter Optional (Material - Accessory code)		-	-	-	-
Pre-filter Standard Material		Stainless coating	Stainless coating	Stainless coating	Stainless coating
Pre-filter Optional (Material & Accessory code)		-	-	-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F
Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m) dB: Dry Bulb; WB: Wet Bulb			

1.1.6. CEILING CASSETTE (RAI-GJ07QHAA / RAI-GJ09QHAA / RAI-GJ12QHAA)

INDOOR	Unit	RAI-GJ07QHAA	RAI-GJ09QHAA	RAI-GJ12QHAA
Nominal capacity adjustable		no	no	no
Nominal Cooling capacity (min - max)	BTU	7000(3050-8500)	9000(3050-10200)	12000(3050-10200)
Cooling sensible capacity	BTU	-	-	-
Nominal Heating capacity (min - max)	BTU	9000(3050-10900)	12000(3050-18000)	12000(3050-18000)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	27/33/37/39/40	27/33/37/39/40	27/33/37/39/40
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	28/34/38/40/41	28/34/38/40/41	28/34/38/40/41
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	54	54	54
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m³/h)	212/297/347/371/388 (360/505/590/630/660)	212/297/347/371/388 (360/505/590/630/660)	212/297/347/371/388 (360/505/590/630/660)
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m³/h)	261/318/371/400/420 444/540/630/678/720	261/318/371/400/420 444/540/630/678/720	261/318/371/400/420 444/540/630/678/720
Fan Motor	W	20	20	20
Dehumidification	l/h	1.2	1.4	1.4
Included drain pump *for RAI/RAD	yes/no	Yes	Yes	Yes
Max. height available for drain pump (RAD/RAI only)	in. (mm)	33(850)	33(850)	33(850)
Drain pump pressure lift *for RAI/RAD	in. (mm)	4.5(115)	4.5(115)	4.5(115)
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no	no
Dimensions (H x W x D)	in. (mm)	11 x 22 x 22 (285 x 570 x 570)	11 x 22 x 22 (285 x 570 x 570)	11 x 22 x 22 (285 x 570 x 570)
Weight *must match with Packing data information	lbs. (kg)	37 (17)	37 (17)	37 (17)
Panel weight *for RAI	lbs. (kg)	6.17 (2.8)	6.17 (2.8)	6.17 (2.8)
Panel dimensions (H x W x D) *for RAI	in. (mm)	1.2 x 24.4 x 24.4 (30 x 620 x 620)	1.2 x 24.4 x 24.4 (30 x 620 x 620)	1.2 x 24.4 x 24.4 (30 x 620 x 620)
Colour (Munsell Code)		-	-	-
Condensate Drain	in. (mm)	1.26 (32)	1.26 (32)	1.26 (32)
Panel reference		-	-	-
Color of the panel (RAL)		-	-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 3/8"	1/4" / 3/8"
Drain diameter (ext)	in. (mm)	1.26 (32)	1.26 (32)	1.26 (32)
Remote control (standard/optional) *	Standard	RC-AGS1EA0N	RC-AGS1EA0N	RC-AGS1EA0N
	Optional	-	-	-
Filter				
ACL Filter Standard (Material & Accessory code)		-	-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-	-
ACL Filter Optional (Material - Accessory code)		-	-	-
Pre-filter Standard Material		NORMAL	NORMAL	NORMAL
Pre-filter Optional (Material & Accessory code)		-	-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F
Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m)			
dB: Dry Bulb; WB: Wet Bulb			

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

1.1.7. CEILING CASSETTE (RAI-GJ18QHAA / RAI-GJ24QHAA)

INDOOR	Unit	RAI-GJ18QHAA	RAI-GJ24QHAA
Nominal capacity adjustable		no	no
Nominal Cooling capacity (min - max)	BTU	18000	24000
Cooling sensible capacity	BTU	-	-
Nominal Heating capacity (min - max)	BTU	16400(3050-22500)	20500(4100-23200)
Noise level cooling (sound pressure) (S/L/M/H/HIHI)	dB(A)	29/35/39/41/43	29/35/39/41/43
Noise level heating (sound pressure) (S/L/M/H/HIHI)	dB(A)	30/36/40/42/44	30/36/40/42/44
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	56	56
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m³/h)	229/318/371/406/424 (390/540/630/690/720)	229/318/371/406/424 (390/540/630/690/720)
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m³/h)	265/353/406/435/459 (450/600/690/738/780)	265/353/406/435/459 (450/600/690/738/780)
Fan Motor	W	57	57
Dehumidification	l/h	1.4	2.8
Included drain pump *for RAI/RAD	yes/no	Yes	Yes
Max. height available for drain pump (RAD/RAI only)	in. (mm)	33(850)	33(850)
Drain pump pressure lift *for RAI/RAD	in. (mm)	4.5(115)	4.5(115)
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	no	no
Dimensions (H x W x D)	in. (mm)	11 x 22 x 22 (285 x 570 x 570)	11 x 22 x 22 (285 x 570 x 570)
Weight *must match with Packing data information	lbs. (kg)	37 (17)	37 (17)
Panel weight *for RAI	lbs. (kg)	6.17 (2.8)	6.17 (2.8)
Panel dimensions (H x W x D) *for RAI	in. (mm)	1.2 x 24.4 x 24.4 (30 x 620 x 620)	1.2 x 24.4 x 24.4 (30 x 620 x 620)
Colour (Munsell Code)		-	-
Condensate Drain	in. (mm)	1.26 (32)	1.26 (32)
Panel reference		-	-
Color of the panel (RAL)		-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4" / 3/8"	1/4" / 1/2"
Drain diameter (ext)	in. (mm)	1.26 (32)	1.26 (32)
Remote control (standard/optional) *	Standard	RC-AGS1EA0N	RC-AGS1EA0N
	Optional	-	-
Filter			
ACL Filter Standard (Material & Accessory code)		-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-
ACL Filter Optional (Material - Accessory code)		-	-
Pre-filter Standard Material		Normal Pre-Filter	Normal Pre-Filter
Pre-filter Optional (Material & Accessory code)		-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F
Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m) dB: Dry Bulb; WB: Wet Bulb			

1.1.8. DUCT TYPE (RAD-GJ07QHAA / RAD-GJ09QHAA/ RAD-GJ12QHAA)

INDOOR	Unit	RAD-GJ07QHAA	RAD-GJ09QHAA	RAD-GJ12QHAA
Nominal capacity adjustable		no	no	no
Nominal Cooling capacity (min - max)	BTU	7000(3050-8500)	9000(3050-10200)	12000(3050-13650)
Cooling sensible capacity	BTU	-	-	-
Nominal Heating capacity (min - max)	BTU	9000(3050-10900)	12000(3050-18000)	16400(3050-22500)
Noise level cooling (sound pressure) (SL/L/M/H/HHI)	dB(A)	30/33/37/41	30/33/37/41	20/33/37/41
Noise level heating (sound pressure) (SL/L/M/H/HHI)	dB(A)	30/34/38/42	30/34/38/42	30/34/38/42
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	57	57	57
Air flow cooling mode (SL / L / M / H / HHI)	cfm (m³/h)	194/229/259/294/300 (330/390/438/498/510)	194/229/259/294/300 (330/390/438/498/510)	194/229/259/294/300 (330/390/438/498/510)
Air flow heating mode (SL / L / M / H / HHI)	cfm (m³/h)	200/235/276/303/309 (342/402/468/516/528)	200/235/276/303/309 (342/402/468/516/528)	200/235/276/303/309 (342/402/468/516/528)
Fan Motor	W	20	20	20
Dehumidification	l/h	1.4	1.4	1.6
Included drain pump *for RAI/RAD	yes/no	yes	yes	yes
Max. height available for drain pump (RAD/RAI only)	in. (mm)	33(850)	33(850)	33(850)
Drain pump pressure lift *for RAI/RAD	in. (mm)	4.5(115)	4.5(115)	4.5(115)
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	70	70	70
Dimensions (H x W x D)	in. (mm)	9x29x15 (235x750x400)	9x29x15 (235x750x400)	9x29x15 (235x750x400)
Weight *must match with Packing data information	lbs. (kg)	35 (16)	35 (16)	35 (16)
Panel weight *for RAI	lbs. (kg)	-	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-	-
Colour (Munsell Code)		-	-	-
Condensate Drain	in. (mm)	0.63(16)	0.63(16)	0.63(16)
Panel reference		-	-	-
Color of the panel (RAL)		-	-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4", 3/8"	1/4", 3/8"	1/4", 3/8"
Drain diameter (ext)	in. (mm)	0.63 (16)	0.63 (16)	0.63 (16)
Remote control (standard/optional) *	Standard	RC-AGU1EA0N	RC-AGU1EA0N	RC-AGU1EA0N
	Optional	-	-	-
Filter				
ACL Filter Standard (Material & Accessory code)		-	-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-	-
ACL Filter Optional (Material - Accessory code)		-	-	-
Pre-filter Standard Material		Normal Pre-Filter	Normal Pre-Filter	Normal Pre-Filter
Pre-filter Optional (Material & Accessory code)		-	-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F

Piping Length: 24-39/64ft (7.5m); **Piping Lift:** 0ft (0m)
dB: Dry Bulb; **WB:** Wet Bulb

2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

1.1.9. DUCT TYPE (RAD-GJ18QHAA / RAD-GJ24QHAA)

INDOOR	Unit	RAD-GJ18QHAA	RAD-GJ24QHAA
Nominal capacity adjustable		no	no
Nominal Cooling capacity (min - max)	BTU	18000(4100-19800)	24000(4100-25600)
Cooling sensible capacity	BTU	-	-
Nominal Heating capacity (min - max)	BTU	20500(4100-23200)	27300(4100-30690)
Noise level cooling (sound pressure) (SL/L/M/H/HIHI)	dB(A)	29/32/35/39	29/32/35/39
Noise level heating (sound pressure) (SL/L/M/H/HIHI)	dB(A)	29/32/35/40	29/32/35/40
Noise level (sound power) *match with Fiche/ Eurovent/Product Info	dB(A)	53	53
Air flow cooling mode (SL / L / M / H / HIHI)	cfm (m³/h)	206/318.1/471/571/671 (348/540/798/972/1140)	206/318.1/471/571/671 (348/540/798/972/1140)
Air flow heating mode (SL / L / M / H / HIHI)	cfm (m³/h)	212/327/480/683/683 (360/558/816/1158/1158)	212/327/480/683/683 (360/558/816/1158/1158)
Fan Motor	W	180	180
Dehumidification	l/h	2.8	2.8
Included drain pump *for RAI/RAD	yes/no	yes	yes
Max. height available for drain pump (RAD/RAI only)	in. (mm)	33(850)	33(850)
Drain pump pressure lift *for RAI/RAD	in. (mm)	4.5(115)	4.5(115)
Static pressure switch at High(L / M / H) *for RAD	Pa (m3/h)	50/100150	50/100150
Dimensions (H x W x D)	in. (mm)	10x35x28 (270x900x700)	10x35x28 (270x900x700)
Weight *must match with Packing data information	lbs. (kg)	77 (35)	77 (35)
Panel weight *for RAI	lbs. (kg)	-	-
Panel dimensions (H x W x D) *for RAI	in. (mm)	-	-
Colour (Munsell Code)		-	-
Condensate Drain	in. (mm)	1.26 (32)	1.26 (32)
Panel reference		-	-
Color of the panel (RAL)		-	-
Running current (C/H) *for single split indoor&outdoor must be matched	A	-	-
Power supply	V	FROM OUTDOOR	FROM OUTDOOR
Cable section (interconnection/*if power supply is connected to indoor)	mm²	0.8x 3+EARTH/-	0.8x 3+EARTH/-
Piping diameter (Liq / Gas)	Inch	1/4", 1/2"	1/4", 1/2"
Drain diameter (ext)	in. (mm)	1.26 (32)	1.26 (32)
Remote control (standard/optional) *	Standard	RC-AGU1EA0N	RC-AGU1EA0N
	Optional	-	-
Filter			
ACL Filter Standard (Material & Accessory code)		-	-
ACL Filter Standard Dimensions (H x W x D)	in. (mm)	-	-
ACL Filter Optional (Material - Accessory code)		-	-
Pre-filter Standard Material		Normal Pre-Filter	Normal Pre-Filter
Pre-filter Optional (Material & Accessory code)		-	-

NOTE:

1. Capacity and seasonal performance data (SEER /HSPF) are based on AHRI 210-240. The nominal heating and cooling capacity is the combined capacity of the HITACHI Split system (Indoor + Outdoor Unit).

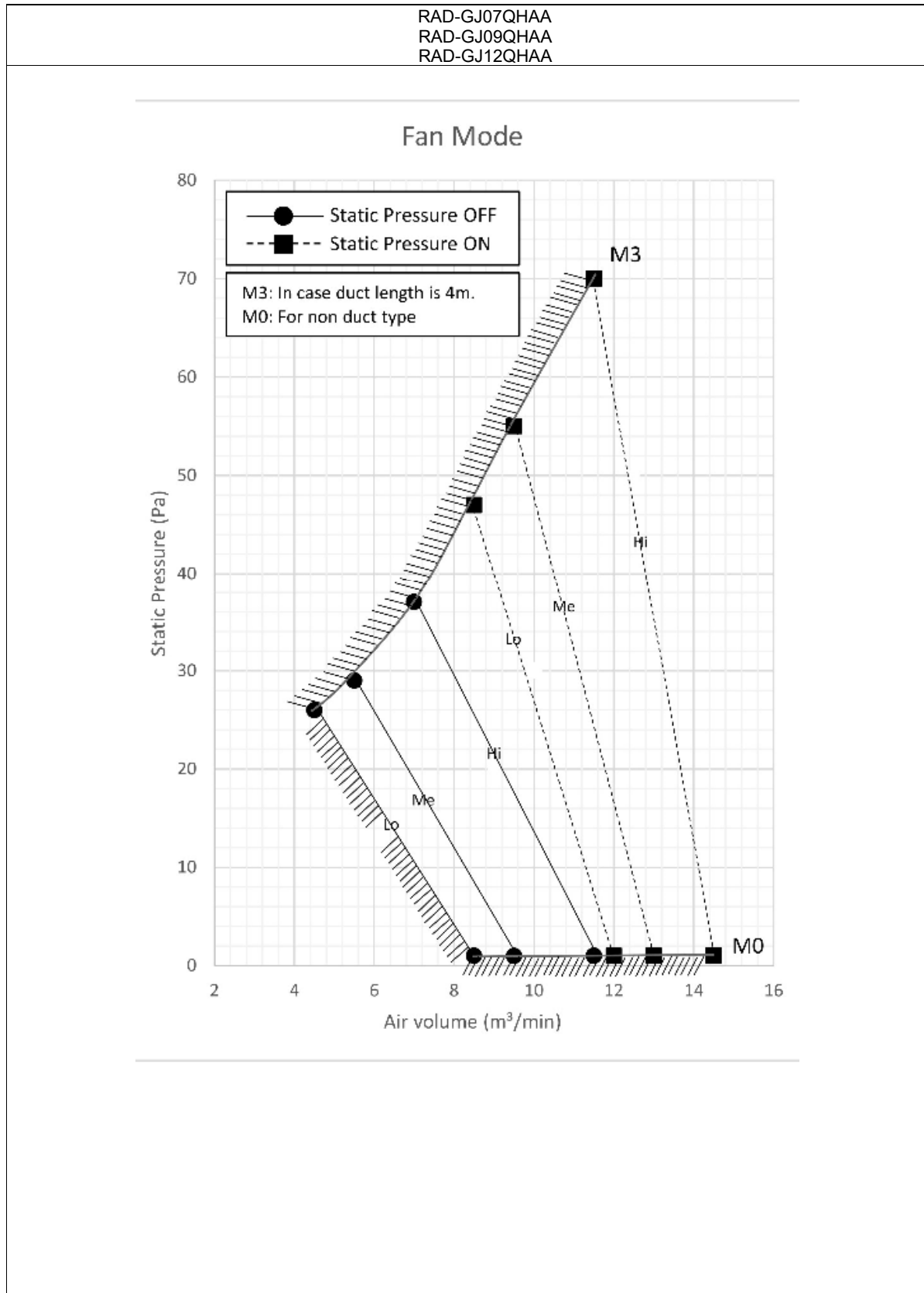
2. The Sound Pressure Level is based on the following conditions:

- 2-5/8ft (0.8m) beneath indoor height center
- 3-9/32ft (1m) from Discharge grille

The above data was measured in an anechoic chamber so that reflected sound should be taken into consideration when installing the unit.

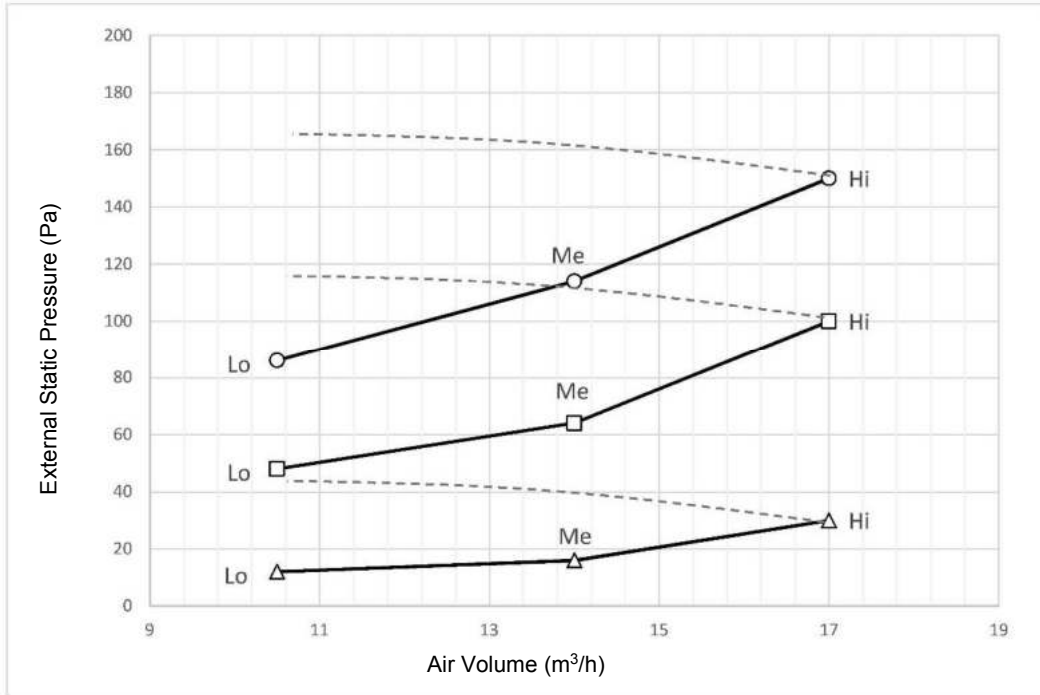
Operation Conditions		Cooling	Heating
Indoor Air Inlet Temperature	dB	80 °F	70 °F
	WB	67 °F	
Outdoor Air Inlet Temperature	dB	95 °F	47 °F
	WB		43 °F
Piping Length: 24-39/64ft (7.5m); Piping Lift: 0ft (0m) dB: Dry Bulb; WB: Wet Bulb			

1.1.10. DUCT STATIC PRESSURE AND AIR FLOW (RAD-GJ07/09/12QHAA)



1.1.11. DUCT STATIC PRESSURE AND AIR FLOW (RAD-GJ18/24QHAA)

RAD-GJ18QHAA
RAD-GJ24QHAA



- High Static Pressure Mode
- Medium Static Pressure Mode
- △— Normal Mode

OUTDOOR	UNIT	RAM-G18N2HAA
Minimum / Maximum indoor units connectable (for MULTI only)		2/5
Minimum / Maximum connected indoor capacity (for MULTI only)	kBTU	14/24
Nominal Cooling capacity (min - max) *for single split indoor&outdoor must be matched	BTU	18000(7000~20500)
Nominal Heating capacity (min - max) *for single split indoor&outdoor must be matched	BTU	22000(9000~23000)
Nominal cooling power input (min - max)	kW	1.44 (0.35 - 1.66)
Nominal heating power input (min - max)	kW	1.955 (0.35- 2.01)
EER2(EER)	Btu/W	12.5
COP (H1 condition)	Btu/W	3.30
SEER2(SEER)		23.00
HSPF2(HSPF)		10.8
Noise level cooling (sound pressure)	dB(A)	50
Noise level heating (sound pressure)	dB(A)	52
Noise level -ODU (sound power)	dB(A)	64
Air flow (Cooling / Heating)	cfm (m³/h)	1273 (2160)
Dimensions (H x W x D)	in. (mm)	31-1/2 x 33-1/2 x 11-3/4 (750x850x298)
Net weight	lbs. (kg)	108(49)
Colour (Munsell Code)		T-Beige (5Y7/2)
Power supply	V/Ph/Hz	208- 230V / 1Ph / 60Hz
Recommended fuse size	A	20
Starting current(rated current of COOL/HEAT whichever higher for inverter)	A	7.00 / 9.50
Running current (C/H) *for single split indoor&outdoor must be matched	A	6.36 / 8.63
Power supply	V	From Outdoor
Cable section (Power)	mm²	2.50x 2+EARTH
Interconnection between indoor unit and outdoor unit	mm²	0.80x 3+EARTH
Piping diameter (Liq / Gas)*for single split indoor&outdoor must be matched	Inch (mm)	(1/4"(6.35), 3/8" (9.52)X2
Minimum piping length	ft. (m)	16(5)
Maximum piping length / height difference	ft. (m)	165(50)/66(20)
Current quantity of refrigerant / Chargeless	Oz (kg)	54.67 (1.55)
Chargeless length / Additional refrigerant charge	ft (m) /oz/ft (g/m)	99 (30) / 0.05 (5)
Working range (cooling / heating)	°F(°C)	14 to 115 (-10 to +46)
	°F(°C)	-4 to 75 (-20 to +24)
Refrigerant		R32
Condenser Fan		Propeller Fan
Compressor	Type	2 Cylinder Rotary
	Oil Type	ACS-68R or equivalent
	Oil Charge l	520±20 ml
	Coil resistance	1.31Ω at 20°C
	Quantity	1

NOTE:

1. The Sound Pressure Level is based on the following conditions:

- Half height of the unit
- 1 meter from Discharge grille

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

OUTDOOR	UNIT	RAM-G24N3HAA
Minimum / Maximum indoor units connectable (for MULTI only)		2 / 3
Minimum / Maximum connected indoor capacity (for MULTI only)	Kbtu	14/ 36
Nominal Cooling capacity (min - max) *for single split indoor&outdoor must be matched	BTU	24000(7000~28000)
Nominal Heating capacity (min - max) *for single split indoor&outdoor must be matched	BTU	24000(9000-31500)
Nominal cooling power input (min - max)	kW	1.92 (0.46 - 3.70)
Nominal heating power input (min - max)	kW	2.00 (0.39 - 2.90)
EER2	Btu/W	12.5
COP	Btu/W	12.5 (11.3)
SEER2		22
HSPF2		9.5
Noise level cooling (sound pressure)	dB(A)	52
Noise level heating (sound pressure)	dB(A)	54
Noise level - ODU (sound power)	dB(A)	66
Air flow (Cooling / Heating)	cfm (m³/h)	1379 (2340)
Dimensions (H x W x D)	Inch (mm)	33-1/2x31-1/2x11-3/4 (800x850x298)
Net weight	lbs. (kg)	121(52)
Colour (Munsell Code)		Beige (5Y7/2)
Power supply	V/Ph/Hz	208- 230V / 1Ph / 60Hz
Recommended fuse size	A	20
Starting current(rated current of COOL/HEAT whichever higher for inverter)	A	8.00/8.00
Running current (C/H) *for single split indoor&outdoor must be matched	A	8.47/8.87
Cable section (power)	mm²	2.50x 2+EARTH
Interconnection between indoor unit and outdoor unit	mm²	0.80x 3+EARTH
Piping diameter (Liq / Gas) *for single split indoor&outdoor must be matched	Inch	(1/4" / 3/8")X3
Minimum piping length	ft. (m)	16(5)
Maximum piping length / height difference	ft. (m)	200(60)/66(20)
Current quantity of refrigerant / Chargeless	Oz (kg)	70.54(2.00)
Chargeless length / Additional refrigerant charge	ft (m)/oz/ft (g/m)	99 (30)/ 0.13 (12)
Working range (cooling / heating)	°F(°C)	14 to 115 (-10 to +46)
	°F(°C)	-4 to 75 (-20 to +24)
Refrigerant		R32
Condenser Fan		Propeller Fan
Compressor	Type	2 Cylinder Rotary
	Oil Type	ACS-68R
	Oil Charge l	770±20
	Coil resistance	1.354Ω at 20°C
	Quantity	1

NOTE:

1. The Sound Pressure Level is based on the following conditions:

- Half height of the unit
- 1 meter from Discharge grille

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

OUTDOOR	UNIT	RAM-G36N4HAA
Minimum / Maximum indoor units connectable (for MULTI only)		2/4
Minimum / Maximum connected indoor capacity (for MULTI only)	kBTU	14/48
Nominal Cooling capacity (min - max) *for single split indoor&outdoor must be matched	BTU	36000(7000~39000)
Nominal Heating capacity (min - max) *for single split indoor&outdoor must be matched		
Nominal cooling power input (min - max)	BTU kW	36000(9000~42000) 2.88 (0.50 - 3.85)
Nominal heating power input (min - max)	kW	2.86 (0.50 - 3.85)
EER2	Btu/W	12.5
COP	Btu/W	12.5 (12.6)
SEER2		23
HSPF2		9.3
Noise level cooling (sound pressure)	dB(A)	52
Noise level heating (sound pressure)	dB(A)	56
Noise level - ODU (sound power)	dB(A)	68
Air flow (Cooling / Heating)	cfm (m³/h)	2297(3900)
Dimensions (H x W x D)	in. (mm)	31-1/2x33-1/2x11-3/4 (800x850x298)
Net weight	lbs. (kg)	163(74)
Colour (Munsell Code)		Beige (5Y7/2)
Power supply	V/Ph/Hz	208- 230V / 1Ph / 60Hz
Recommended fuse size	A	25
Starting current(rated current of COOL/HEAT whichever higher for inverter)	A	8.00/8.00
Running current (C/H) *for single split indoor&outdoor must be matched	A	13.24/13.31
Cable section (power)	mm²	2.50x 2+EARTH
Interconnection between indoor unit and outdoor unit	mm²	0.80x 3+EARTH
Piping diameter (Liq / Gas) *for single split indoor&outdoor must be matched	Inch	(1/4,3/8)X3+(1/4,1/2)X1
Minimum piping length	ft. (m)	16(5)
Maximum piping length / height difference	ft. (m)	230(70)/66(20)
Current quantity of refrigerant / Chargeless	Oz (kg)	95.23(2.70)
Chargeless length / Additional refrigerant charge	ft (m) /oz/ft (g/m)	99(30) / 0.13 (12)
Working range (cooling / heating)	°F(°C)	14 to 115 (-10 to +46)
	°F(°C)	-4 to 75 (-20 to +24)
Refrigerant		R32
Condenser Fan		Propeller Fan
Compressor	Type	2 Cylinder Rotary
	Oil Type	ACS-68R
	Oil Charge l	830±20 ml
	Coil resistance	0.932Ω at 20°C
	Quantity	1

NOTE:

1. The Sound Pressure Level is based on the following conditions:

- Half height of the unit
- 1 meter from Discharge grille

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

2 DIMENSIONAL DATA

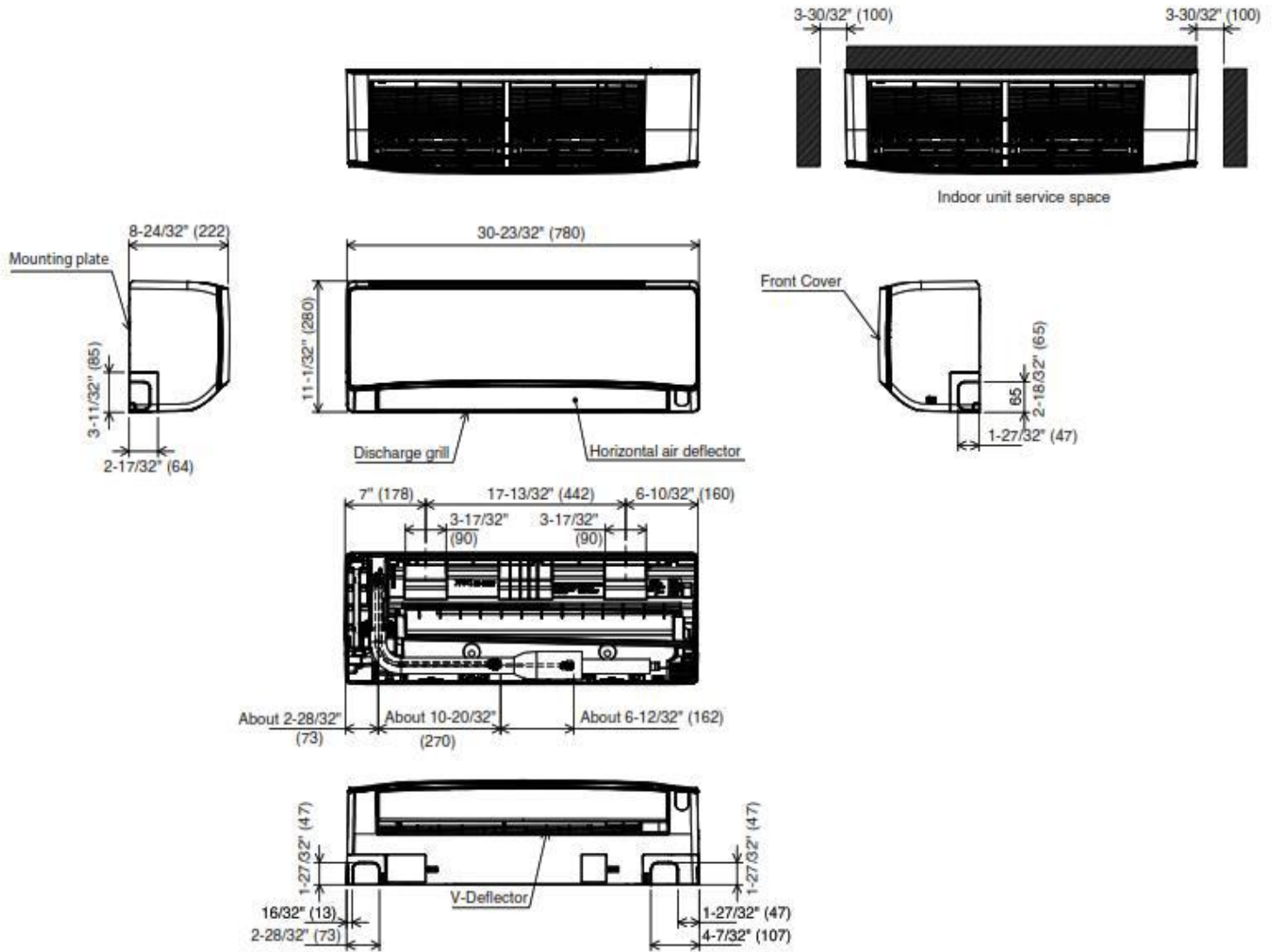
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2.1. MULTIZONE INDOOR UNITS

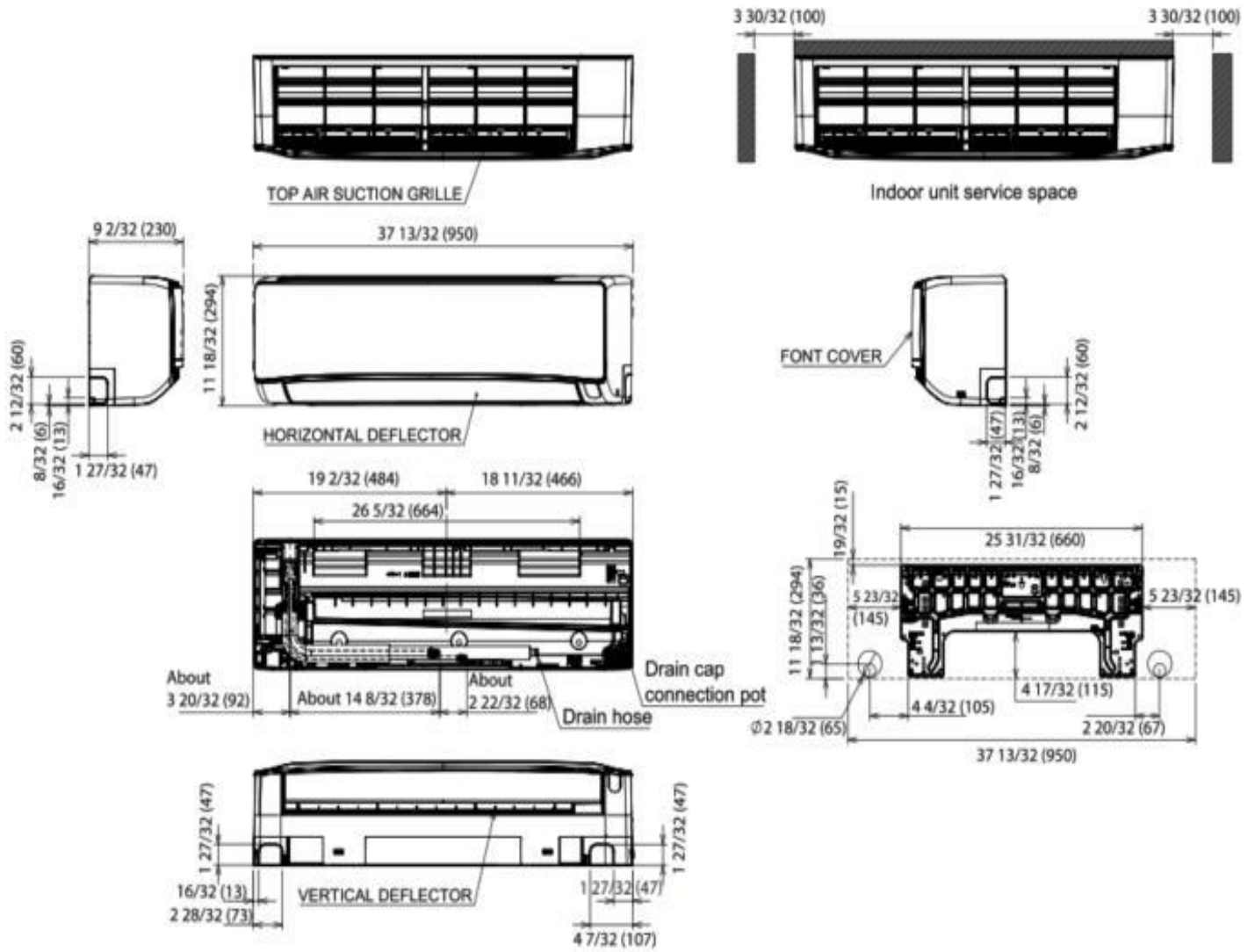
2.1.1. WALL TYPE: RAK-DJ07QHAA / RAK-DJ09RHAA / RAK-DJ12RHAA

Unit:inch(mm)



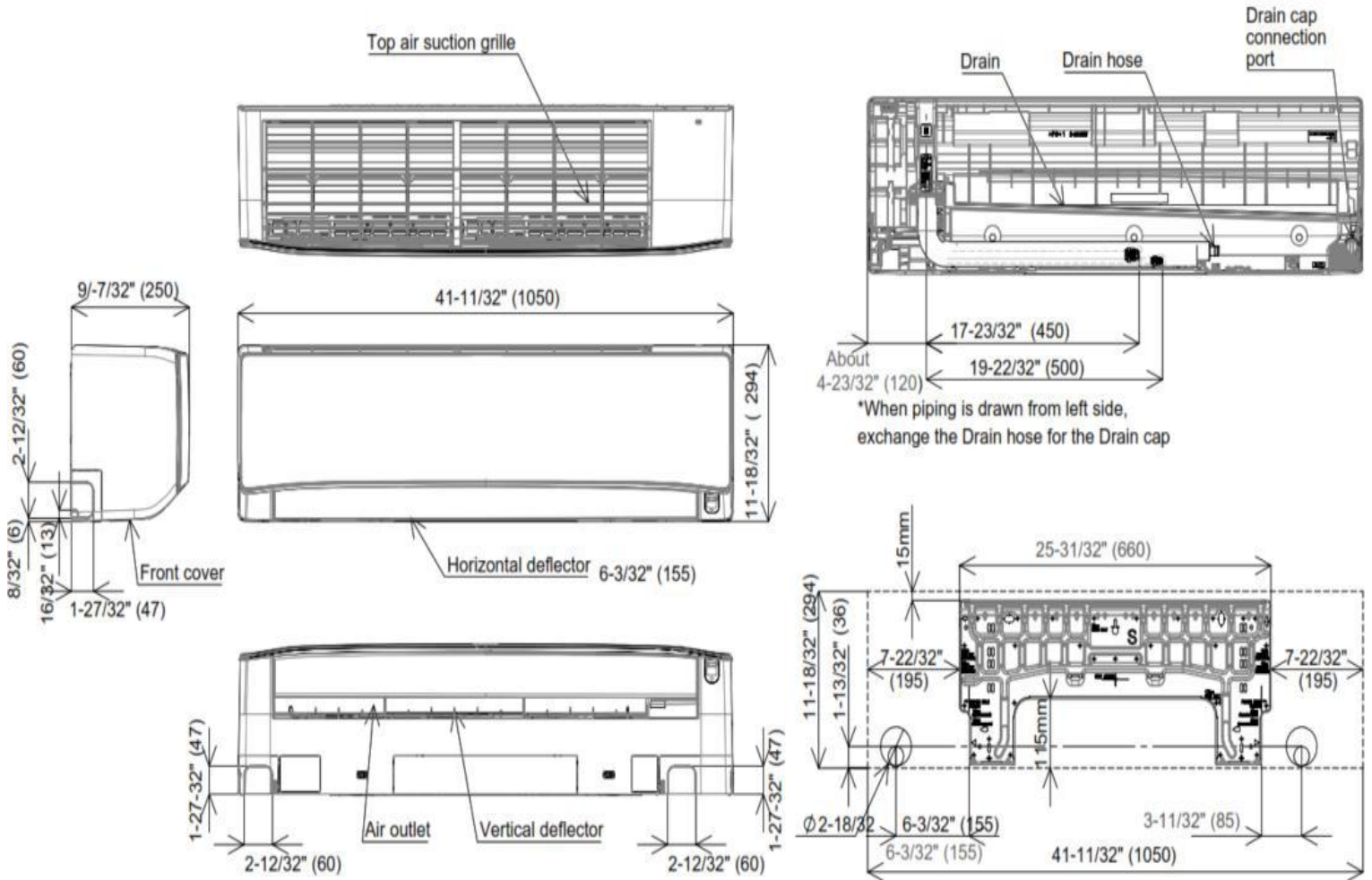
2.1.2. WALL TYPE: RAK-DJ18RHAA

Unit:inch(mm)



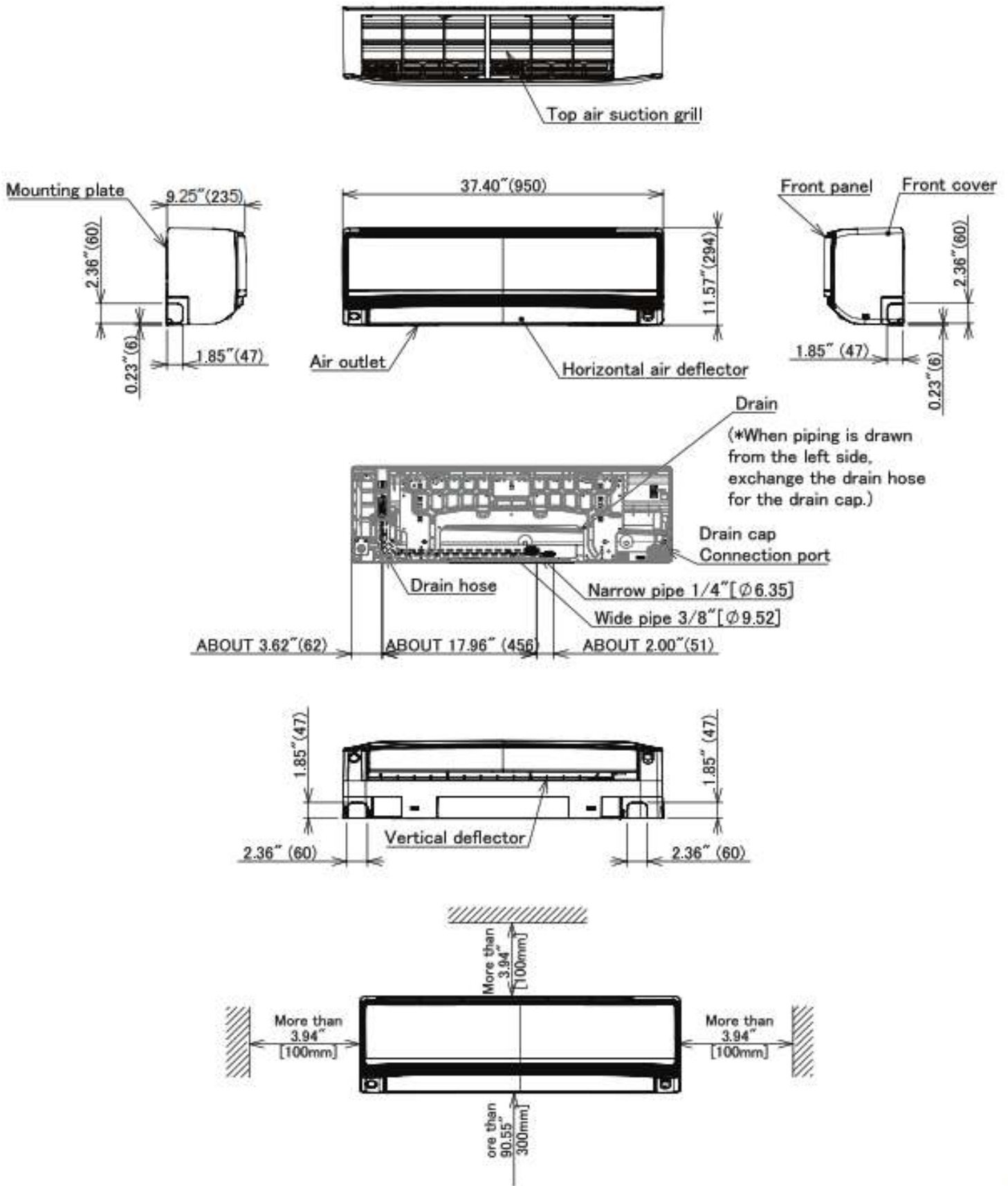
2.1.3. WALL TYPE: RAK-DJ24RHAA

Unit:inch(mm)



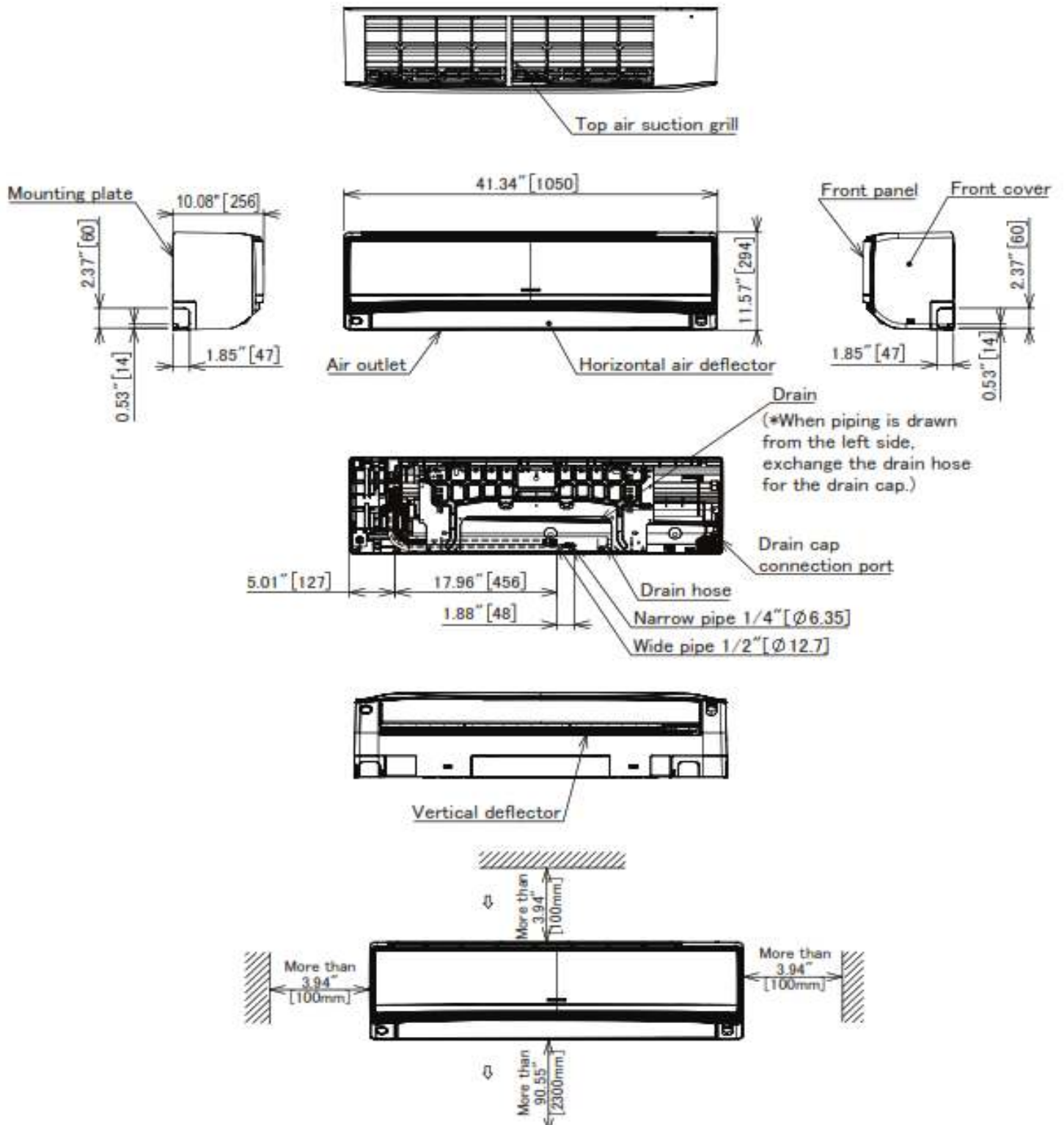
2.1.4. WALL TYPE: RAK-GJ07QHAA / RAK-GJ09QHAA / RAK-GJ12QHAA

Unit:inch(mm)



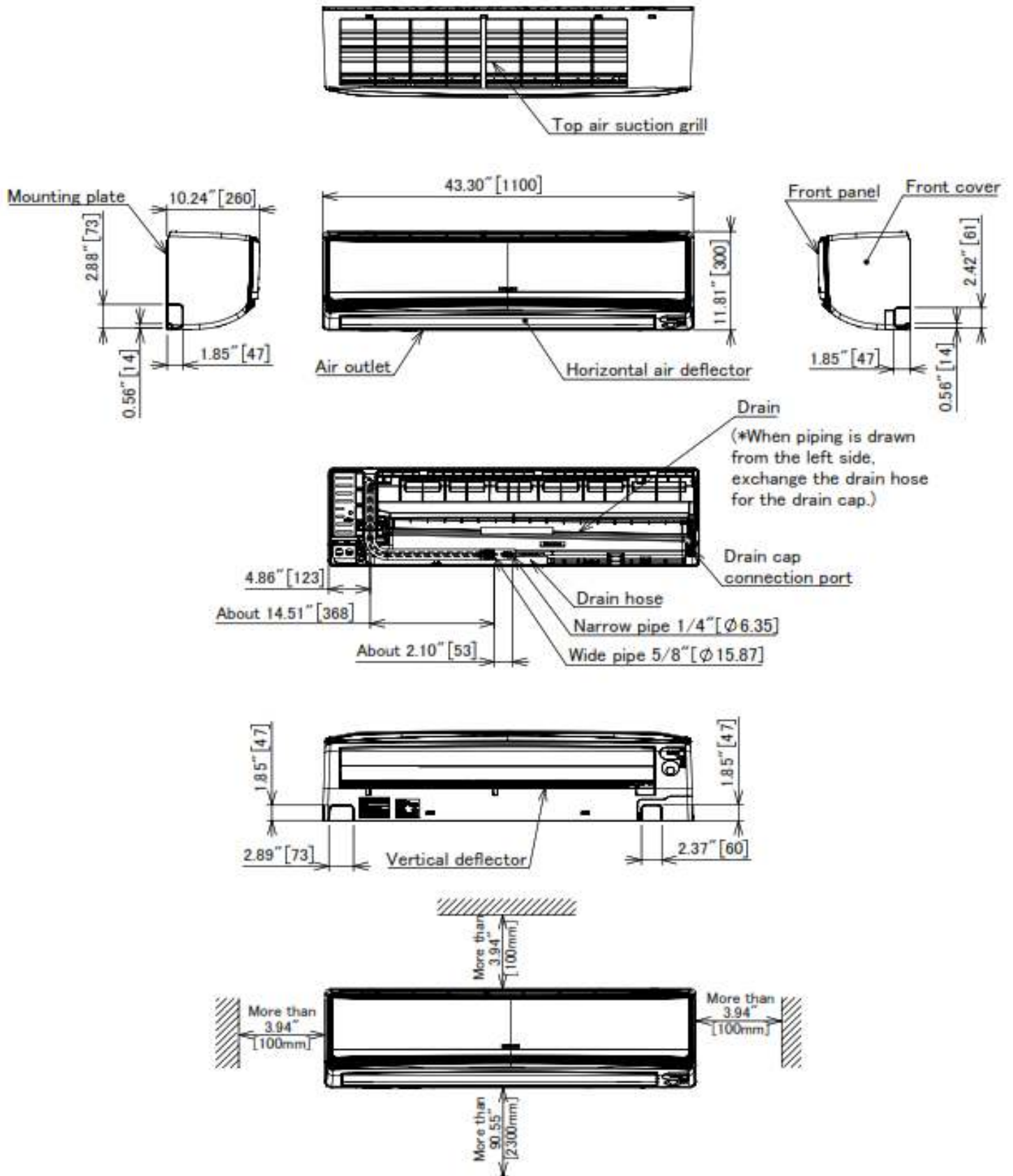
2.1.5. WALL TYPE: RAK-GJ18QHAA

Unit:inch(mm)



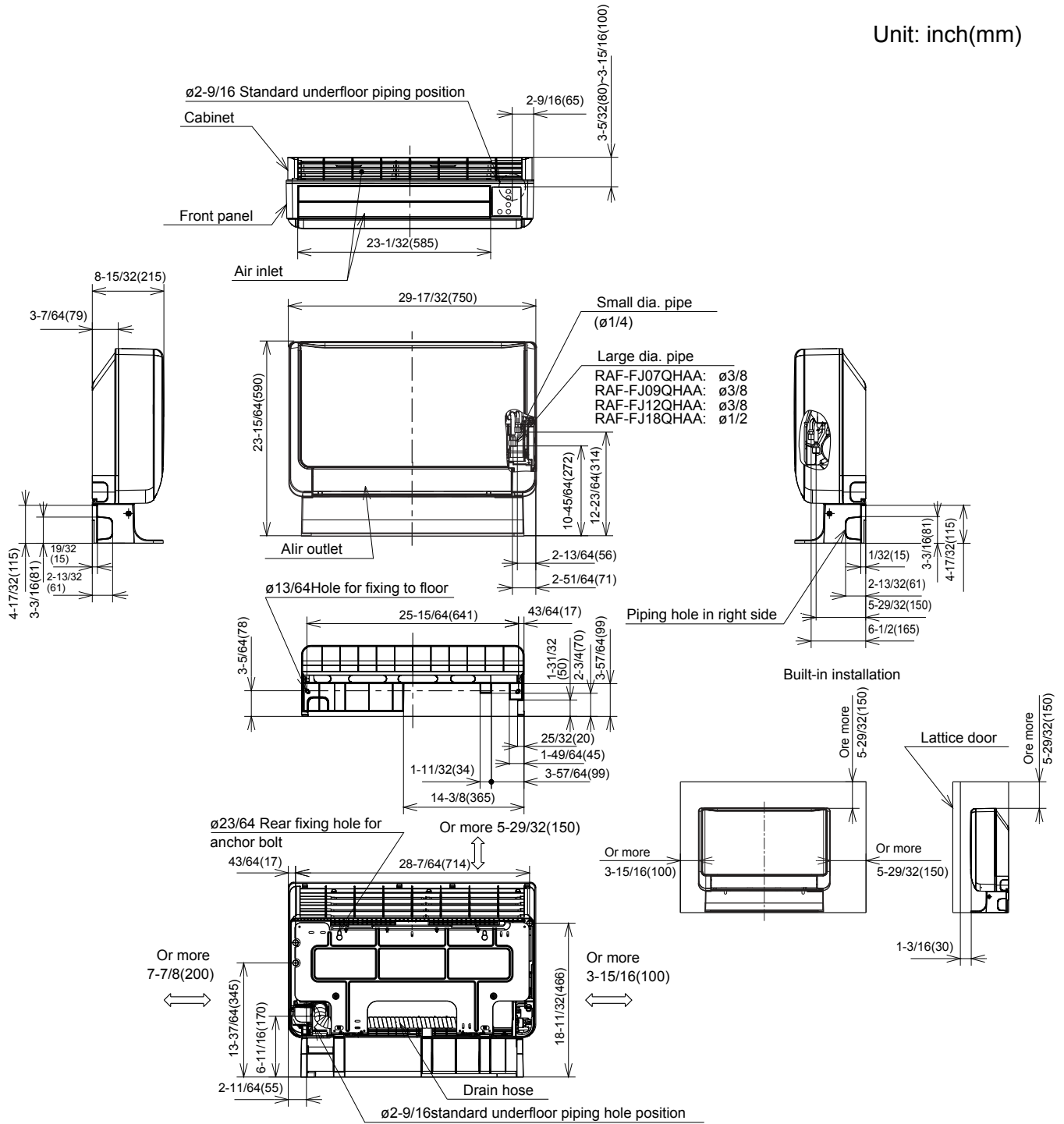
2.1.6. WALL TYPE: RAK-GJ24QHAA

Unit:inch(mm)



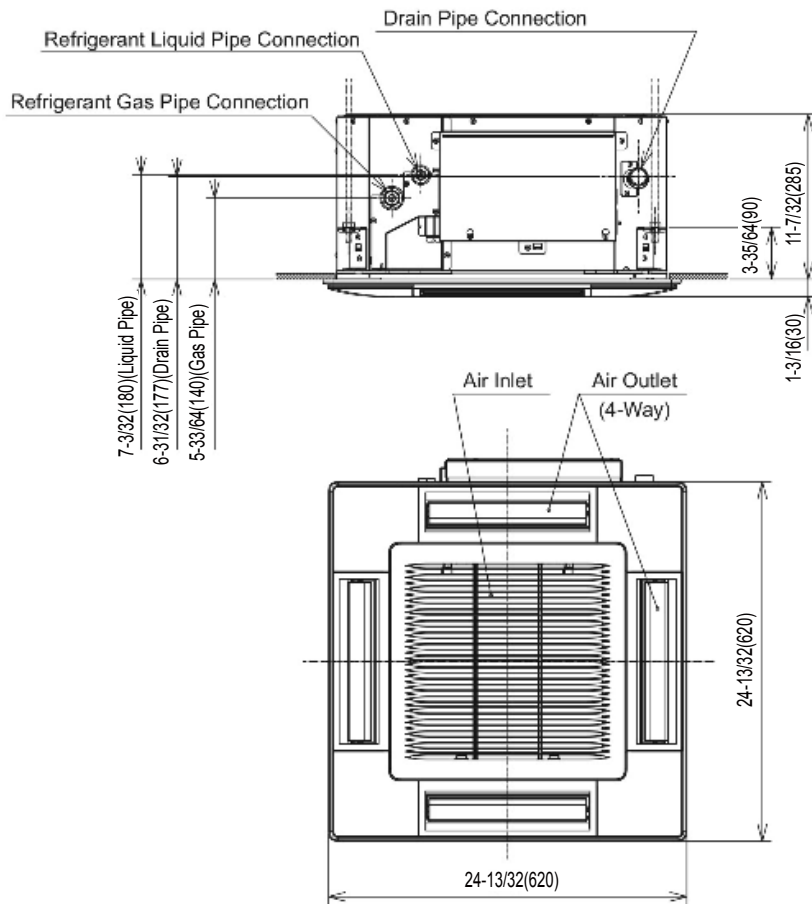
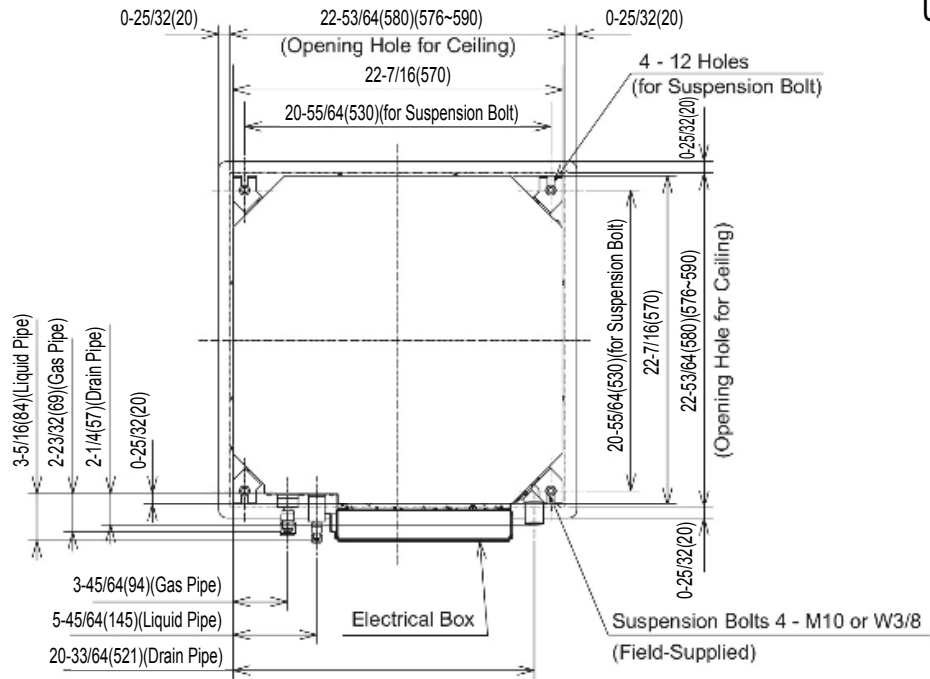
2.1.7. FLOOR TYPE: RAF-FJ07QHAA / FJ09QHAA / FJ12QHAA / FJ18QHAA

Unit: inch(mm)



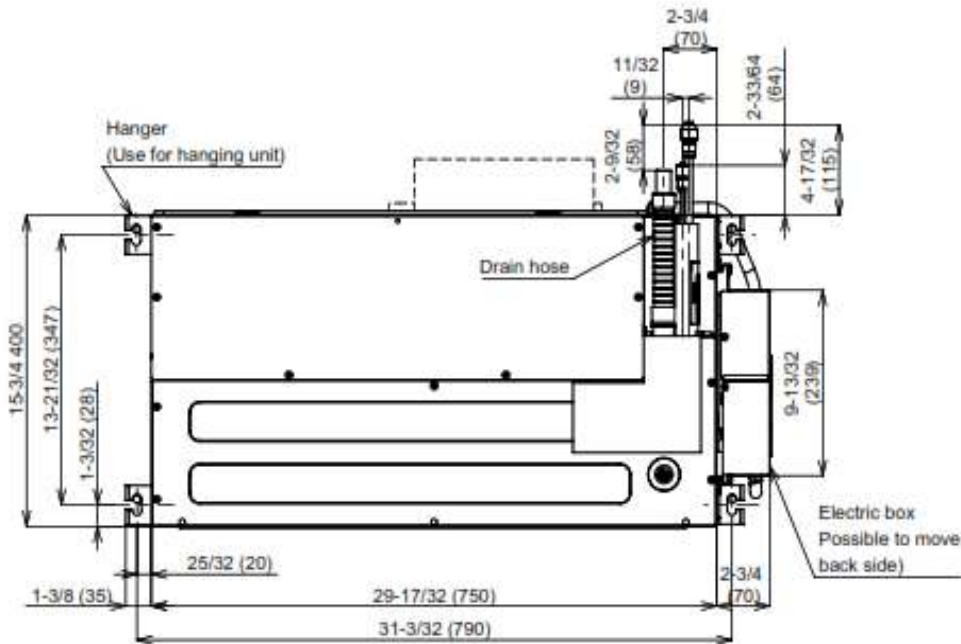
2.1.8. CEILING CASSETTE TYPE: RAI-GJ07QHAA/RAI-GJ09QHAA/RAI-GJ12QHAA/RAI-GJ18QHAA
RAI-GJ24QHAA

Unit: inch(mm)

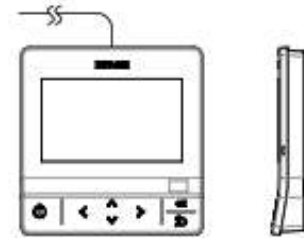


2.1.9. DUCT TYPE: RAD-GJ07QHAA / GJ09QHAA / GJ12QHAA

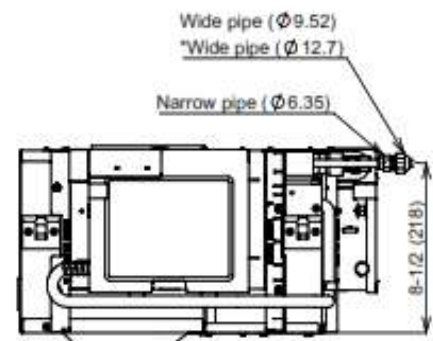
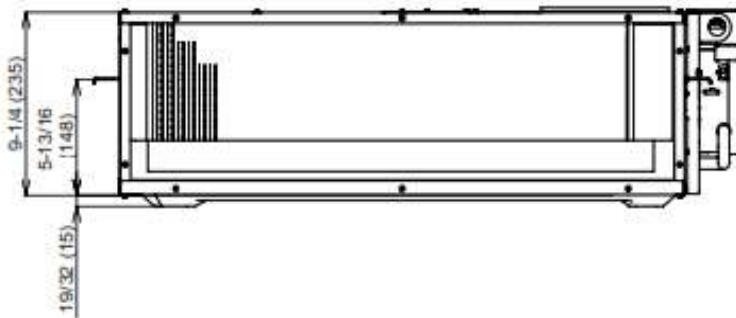
Unit: inch(mm)



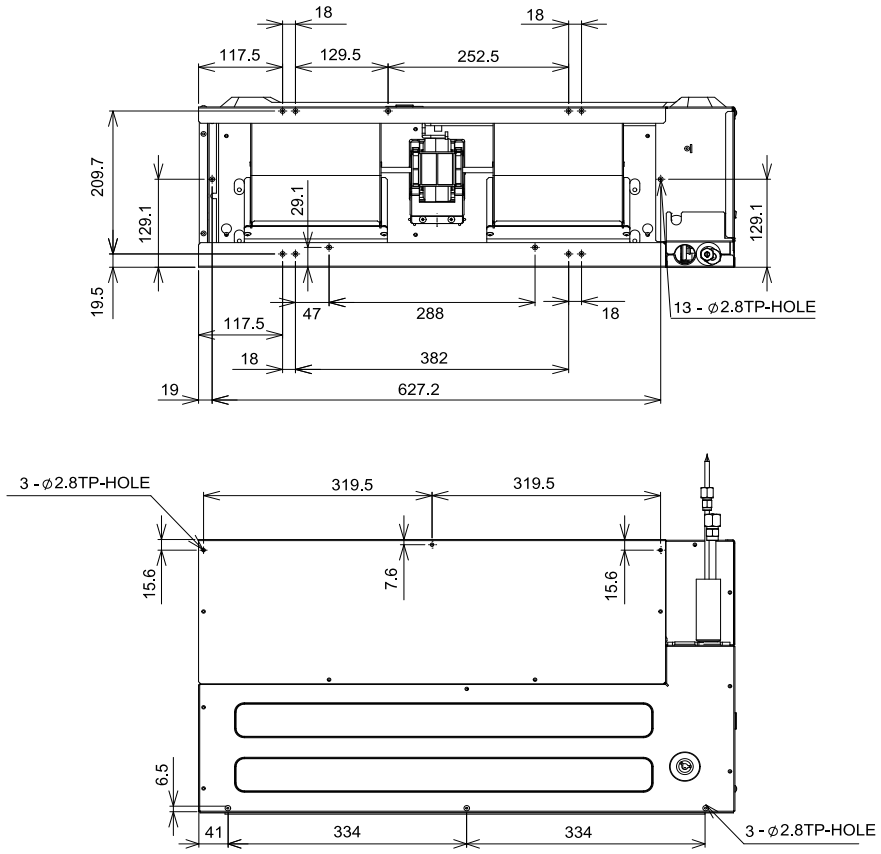
OPTIONAL
Wired Remote Controller
(SPX-URFG1)



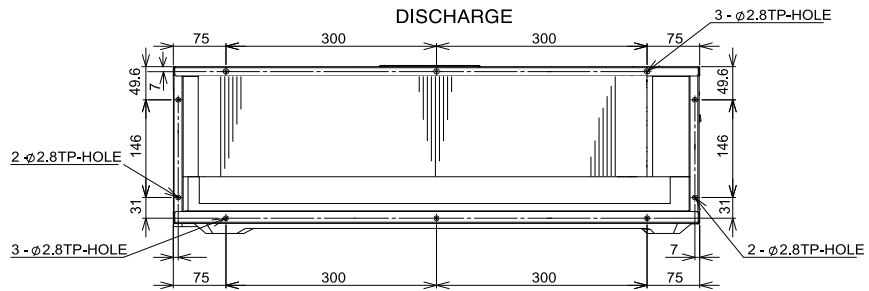
OPTIONAL
Wireless Remote Controller
(RC-AGU1EA0N)



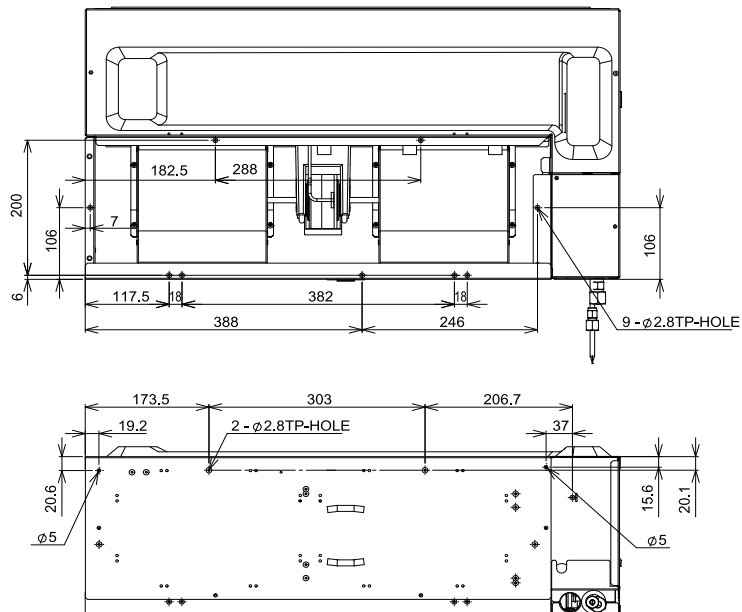
BACK SUCTION



DISCHARGE



BOTTOM SUCTION

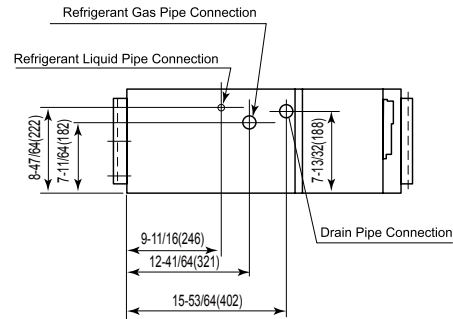
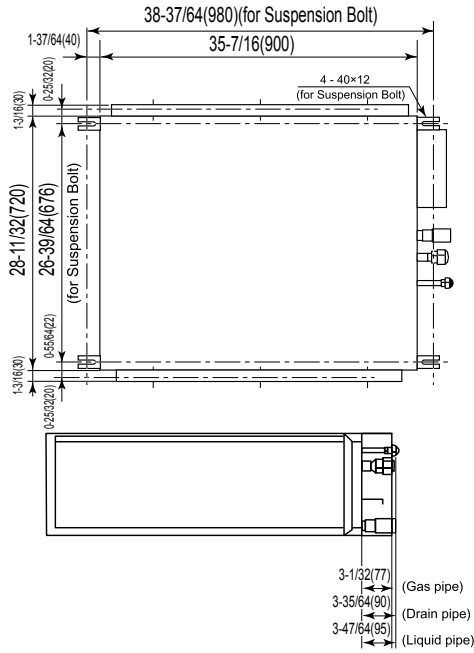


Cautions:

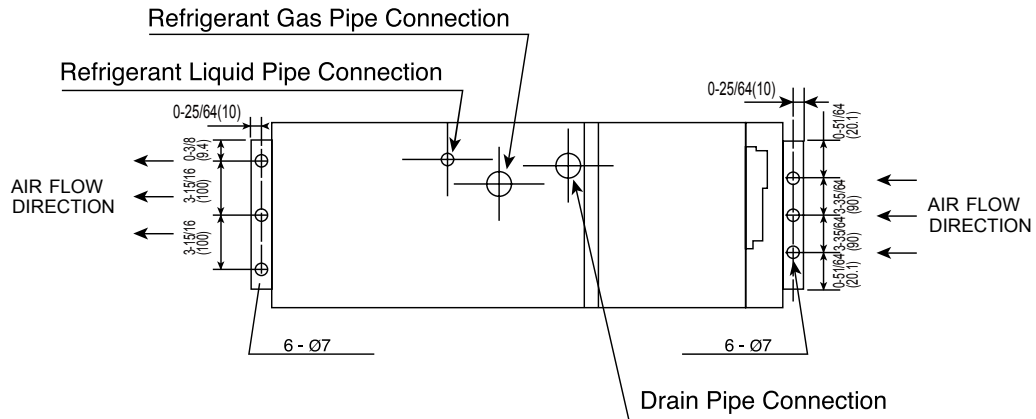
1. Use insulated pipes for both large and small diameters.

2.1.10 DUCT TYPE: RAD-GJ18QHAA / GJ24QHAA

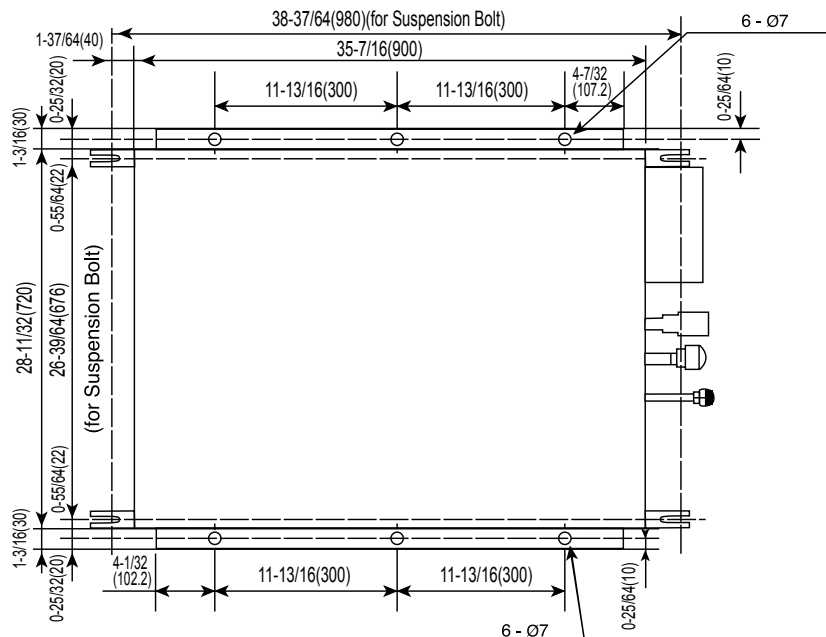
Unit:inch(mm)



SIDE VIEW

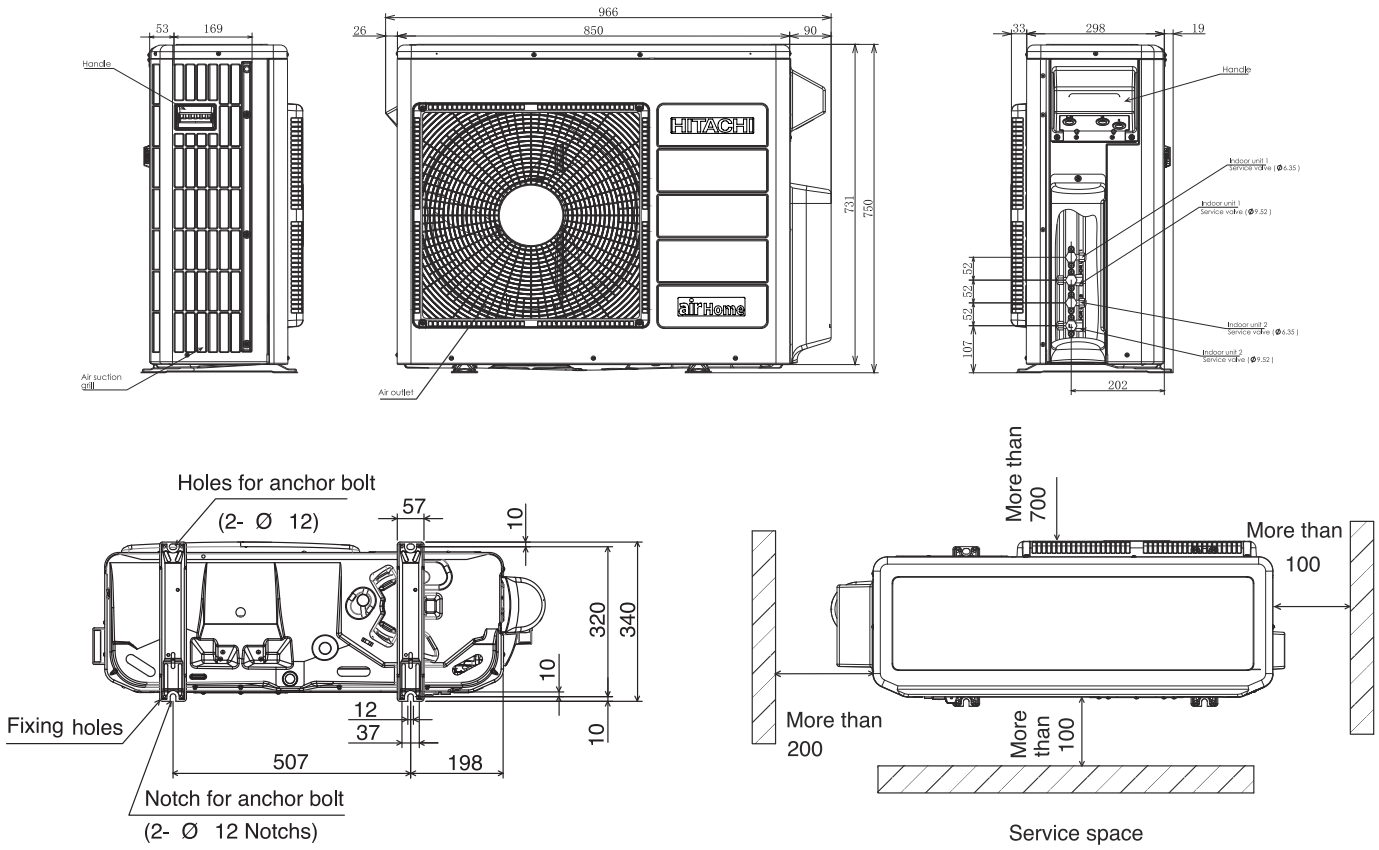


TOP VIEW

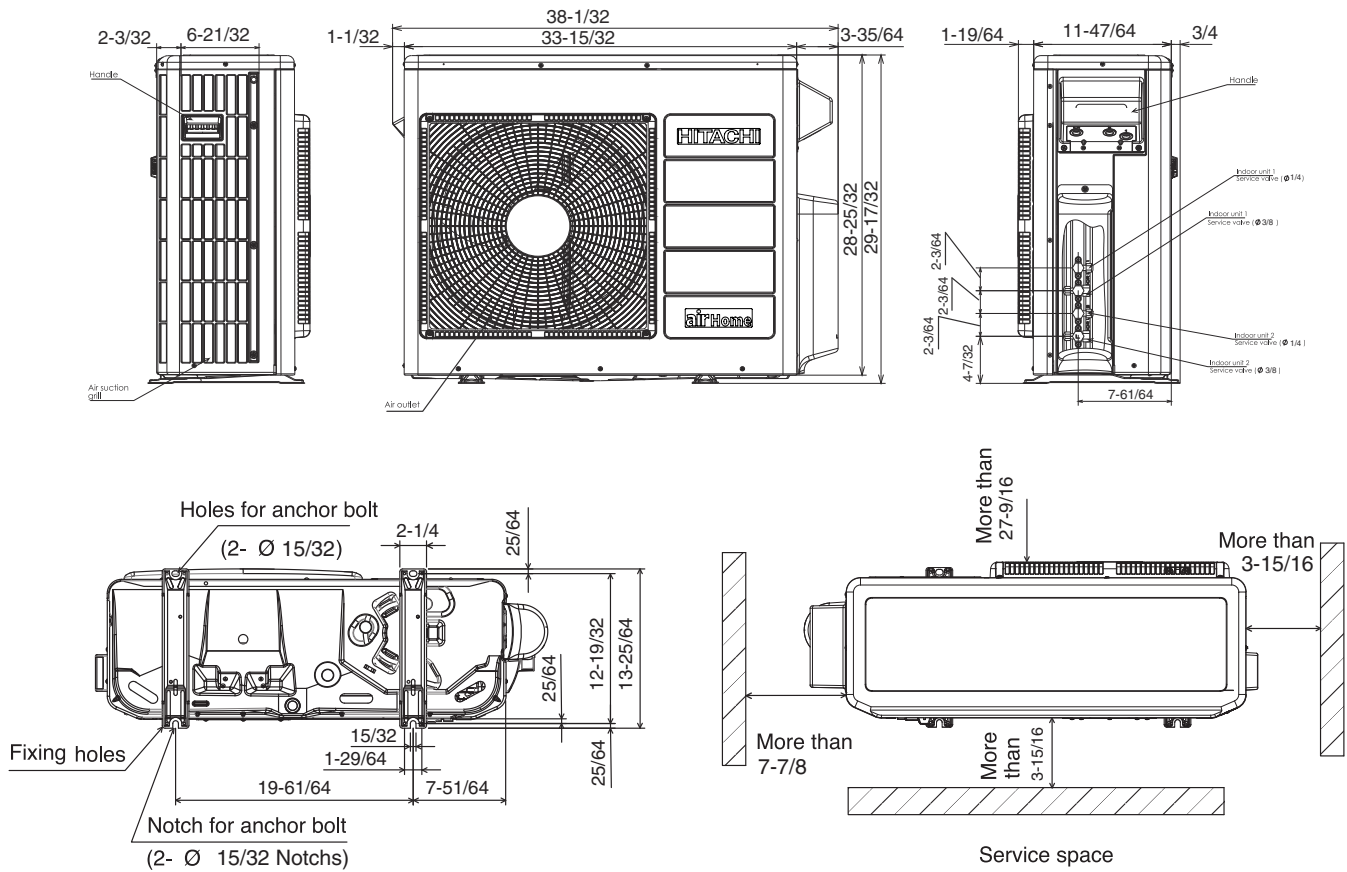


2.2 RAM-G18N2HAA

Unit: mm

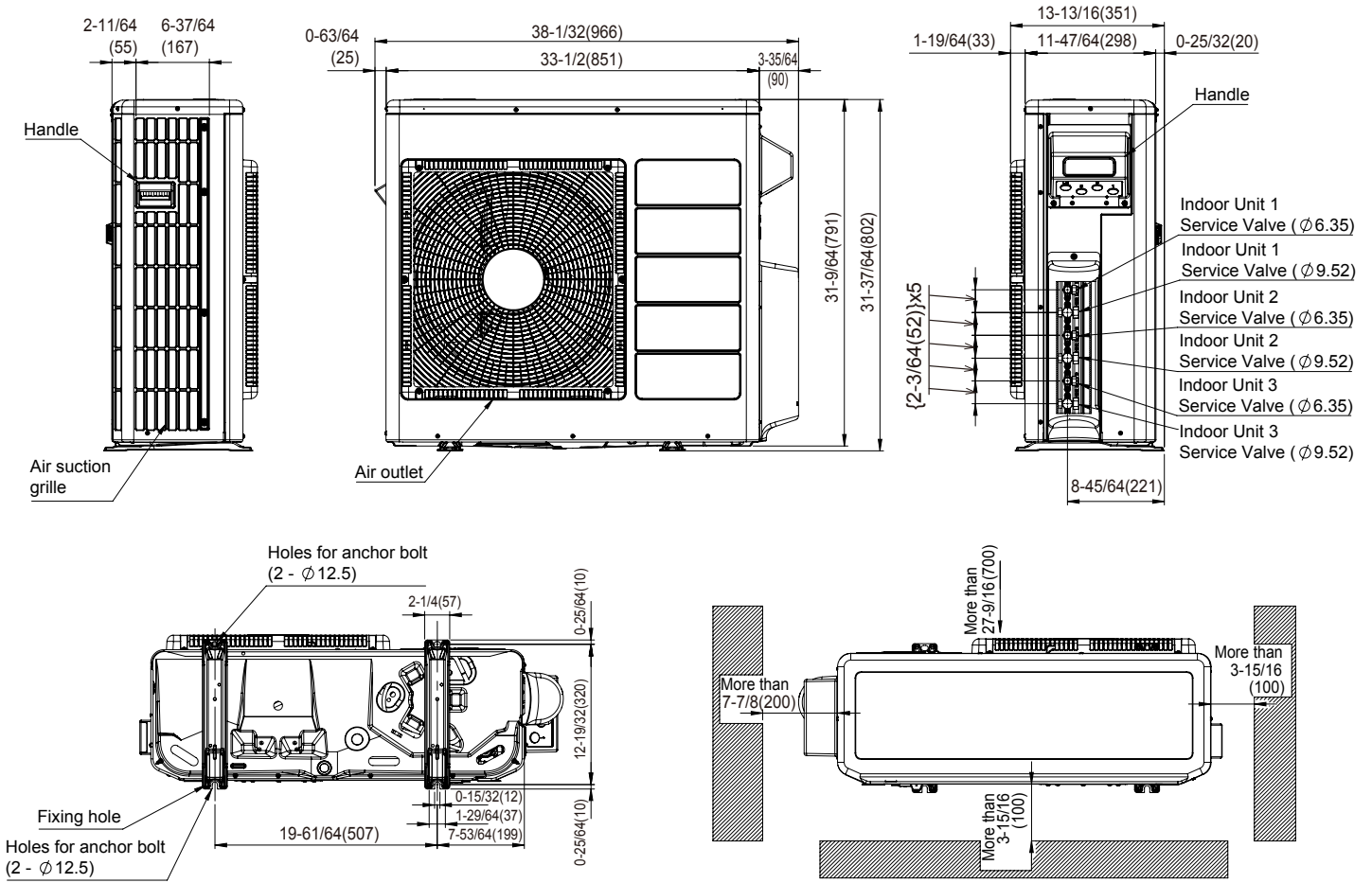


Unit: Inch



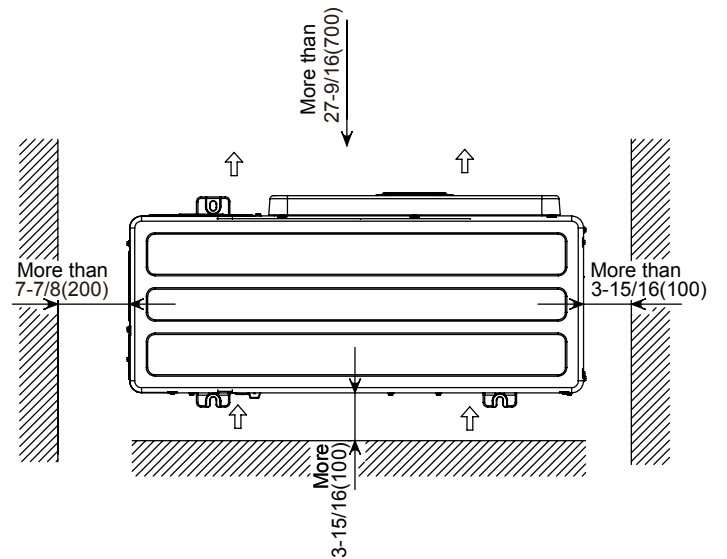
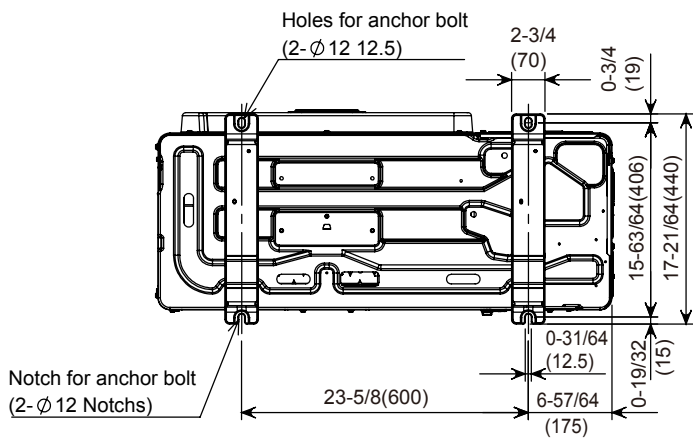
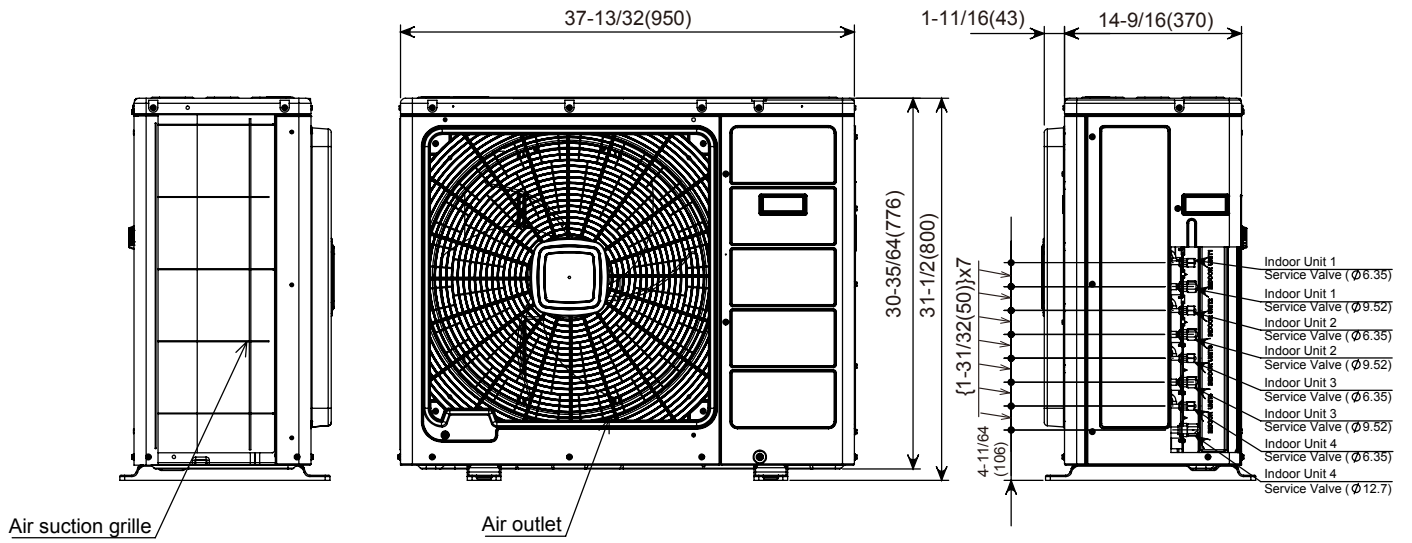
2.3 RAM-G24N3HAA

Unit: inch(mm)



2.4 RAM-G36N4HAA

Unit: inch(mm)



Service space

3 CAPACITIES AND SELECTION DATA

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3.1. SYSTEM SELECTION PROCEDURE

The following system procedure is giving a sample regarding unit selection system, indicating how to use all parameters showed in this chapter.

3.1.1. SELECTION UNIT FEATURES

Considering the building distribution, the possible indoor unit position and the available air flow distribution, select the unit features that are giving the best efficiency and comfort to each room.

Decide the Outdoor Unit position getting easy service maintenance and easy refrigerant pipe installation.

Therefore, the maximum indoor unit capacity combined with outdoor unit should be carefully considered for correct indoor unit distribution at each building

3.1.2. SELECTION GUIDE

The following guide giving the method for indoor and outdoor unit selection.

*** Step 1: Determine the system requirements**

Calculate the cooling capacity and heating capacity of each indoor unit according to the following conditions:

Total Load for each room

Item		Room					1+2+3+4+5
		1	2	3	4	5	
Estimated Cooling Load	kW	2.46	2.50	2.51	2.53	2.59	12.59
Estimated Heating Load	kW	2.94	2.94	3.17	3.08	2.98	15.11

*Example

Temperature Condition

Cooling	Heating
Outdoor Air Inlet • Dry Bulb: 95°F	Outdoor Air Inlet • Dry Bulb: 47°F • Wet Bulb: 43°F
Indoor Air Inlet • Dry Bulb: 80°F • Wet Bulb: 67°F	Indoor Air Inlet • Dry Bulb: 70°F

*Example

*** Step 2: Select Unit Capacity Performance**

The unit kW is selected following the Cooling capacity and Heating capacity showed in the combination table.

*** Step 3: Read Selected Capacity Performance**

The unit performance should be calculated considering the following correction factors:

1. Cooling and Heating piping length
2. Outdoor unit performance capacity
3. Indoor unit performance capacity for each room cooling load

Kindly refer to the unit selection combination table for correct capacity performance.

COOLING [60Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																						
		EWB		14			70			81			90			95			104			109		
		°F	°F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
RAM-G18N2HAA	54	64	12450	3284	714	14906	4629	897	13796	4273	1057	14760	4598	1325	14220	4396	1382	13320	4143	1483	12780	3941	1541	
	57	68	12450	3284	714	16016	4629	897	14906	4318	1069	15840	4598	1339	15300	4446	1397	14220	4143	1498	13680	3992	1570	
	61	72	12450	3495	725	17126	4629	908	15857	4318	1082	16920	4598	1354	16380	4446	1426	15300	4143	1526	14760	3992	1584	
	64	77	13350	3747	737	18236	5030	920	16809	4674	1094	18000	5002	1368	17280	4800	1426	16200	4497	1541	15480	4295	1598	
	66	81	13800	3874	748	18870	5297	932	17443	4896	1106	18720	5255	1382	18000	5053	1440	16920	4750	1541	16200	4547	1598	
	72	86	15300	3832	748	20931	5252	932	19346	4852	1106	20700	5204	1397	19980	5002	1454	18000	4851	1598	16740	4750	1685	
75	90	16350	3832	759	22359	5252	944	20614	4852	1119	22140	5204	1397	21240	5002	1469	18720	4952	1642	17100	4901	1742		
7.0	54	64	4842	1277	293	5797	1800	367	5365	1662	433	5740	1788	543	5530	1710	566	5180	1611	608	4970	1533	631	
	57	68	4842	1277	293	6228	1800	367	5797	1679	438	6160	1788	549	5950	1729	572	5530	1611	614	5320	1552	643	
	61	72	4842	1359	297	6660	1800	372	6167	1679	443	6580	1788	555	6370	1729	584	5950	1611	625	5740	1552	649	
	64	77	5192	1457	302	7092	1956	377	6537	1818	448	7000	1945	561	6720	1867	584	6300	1749	631	6020	1670	655	
	66	81	5367	1506	306	7338	2060	382	6783	1904	453	7280	2044	566	7000	1965	590	6580	1847	631	6300	1768	655	
	72	86	5950	1490	306	8140	2043	382	7523	1887	453	8050	2024	572	7770	1945	596	7000	1886	655	6510	1847	690	
75	90	6358	1490	311	8695	2043	387	8017	1887	458	8610	2024	572	8260	1945	602	7280	1926	673	6650	1906	714		
9.0	54	64	6225	1642	392	7453	2315	492	6898	2137	580	7380	2299	727	7110	2198	758	6660	2072	814	6390	1971	845	
	57	68	6225	1642	392	8008	2315	492	7453	2159	587	7920	2299	735	7650	2223	766	7110	2072	822	6840	1996	861	
	61	72	6225	1747	398	8563	2315	498	7929	2159	593	8460	2299	743	8190	2223	782	7650	2072	837	7380	1996	869	
	64	77	6675	1874	404	9118	2515	505	8404	2337	600	9000	2501	751	8640	2400	782	8100	2248	845	7740	2147	877	
	66	81	6900	1937	410	9435	2648	511	8721	2448	607	9360	2627	758	9000	2526	790	8460	2375	845	8100	2274	877	
	72	86	7650	1916	410	10466	2626	511	9673	2426	607	10350	2602	766	9990	2501	798	9000	2425	877	8370	2375	924	
75	90	8175	1916	416	11179	2626	518	10307	2426	614	11070	2602	766	10620	2501	806	9360	2476	901	8550	2451	956		
12.0	54	64	8300	2190	531	9937	3086	666	9197	2849	785	9840	3065	984	9480	2931	1027	8880	2762	1102	8520	2627	1145	
	57	68	8300	2190	531	10677	3086	666	9937	2878	794	10560	3065	995	10200	2964	1038	9480	2762	1113	9120	2661	1166	
	61	72	8300	2330	539	11417	3086	675	10571	2878	804	11280	3065	1006	10920	2964	1059	10200	2762	1134	9840	2661	1177	
	64	77	8900	2498	547	12157	3353	684	11206	3116	813	12000	3335	1017	11520	3200	1059	10800	2998	1145	10320	2863	1188	
	66	81	9200	2583	556	12580	3531	693	11629	3264	822	12480	3503	1027	12000	3369	1070	11280	3166	1145	11080	3032	1188	
	72	86	10200	2554	556	13954	3502	693	12897	3235	822	13800	3470	1038	13320	3335	1081	12000	3234	1188	11160	3166	1252	
75	90	10900	2554	564	14906	3502	701	13743	3235	831	14760	3470	1038	14160	3335	1091	12480	3301	1220	11400	3267	1295		
7+7	54	64	9683	2554	506	11593	3601	635	10730	3324	749	11480	3576	938	11060	3419	979	10360	3223	1051	9940	3065	1091	
	57	68	9683	2554	506	12457	3601	635	11593	3358	757	12320	3576	949	11900	3458	989	11060	3223	1061	10640	3105	1112	
	61	72	9683	2718	514	13320	3601	643	12333	3358	766	13160	3576	959	12740	3458	1010	11900	3223	1081	11480	3105	1122	
	64	77	10383	2915	522	14183	3912	652	13073	3635	775	14000	3891	969	13440	3733	1010	12600	3498	1091	12040	3340	1132	
	66	81	10733	3013	530	14677	4120	660	13567	3808	784	14560	4087	979	14000	3930	1020	13160	3694	1091	12600	3537	1132	
	72	86	11900	2980	530	16280	4085	660	15047	3774	784	16100	4048	989	15540	3891	1030	14000	3773	1132	13020	3694	1193	
75	90	12717	2980	538	17390	4085	669	16033	3774	793	17220	4048	989	16520	3891	1040	14560	3851	1163	13300	3812	1234		
7+9	54	64	11067	2919	605	13250	4115	760	12263	3798	895	13120	4087	1122	12640	3907	1171	11840	3683	1257	11360	3503	1305	
	57	68	11067	2919	605	14236	4115	760	13250	3838	906	14080	4087	1135	13600	3952	1183	12640	3683	1269	12160	3548	1330	
	61	72	11067	3107	615	15223	4115	770	14095	3838	916	15040	4087	1147	14560	3952	1208	13600	3683	1293	13120	3548	1342	
	64	77	11867	3331	624	16210	4471	780	14941	4155	927	16000	4446	1159	15360	4267	1208	14400	3997	1305	13760	3818	1354	
	66	81	12267	3443	633	16773	4708	790	15505	4352	937	16640	4671	1171	16000	4491	1220	15040	4222	1305	14400	4042	1354	
	72	86	13600	3406	633	18606	4669	790	17196	4313	937	18400	4626	1183	17760	4446	1232	16000	4312	1354	14880	4222	1427	
75	90	14533	3406	643	19874	4669	800	18324	4313	948	19680	4626	1183	18880	4446	1244	16640	4402	1391	15200	4357	1476		
7+12	54	64	13142	3467	744	15734	4886	934	14562	4511	1101	15580	4853	1380	15010	4640	1440	14060	4373	1545	13490	4160	1605	
	57	68	13142	3467	744	16905	4886	934	15734	4558	1114	16720	4853	1395	16150	4693	1455	15010	4373	1560	14440	4213	1635	
	61	72	13142	3689	756	18077	4886	946	16738	4558	1127	17860	4853	1410	17290	4693	1485	16150	4373	1590	15580	4213	1650	
	64	77	14092	3956	767	19249	5309	959	17742	4933	1140	19000	5280	1425	18240	5067	1485	17100	4747	1605	16340	4533	1665	
	66	81	14567	4089	779	19918	5591	971	18412	5168	1153	19760	5547	1440	19000	5333	1500	17860	5013	1605	17100	4800	1665	
	72	86	16150	4045	779	22094	5544	971	20420	5121	1153	21850	5493	1455	21090	5280	1515	19000	5120	1665	17670	5013	1755	
75	90	17258	4045	791	23601	5544	983	21760	5121	1166	23370	5493	1455	22420	5280	1530	19760	5227	1710	18050	5173	1815		
9+9	54	64	12450	3284	719	14906	4629	903	13796	4273	1064	14760	4598	1334	14220	4396	1392	13320	4143	1494	12780	3941	1552	
	57	68	12450	3284	719	16016	4629	903	14906	4318	1077	15840	4598	1349	15300	4446	1407	14220	4143	1508	13680	3992	1581	
	61	72	12450	3495	730	17126	4629	915	15857	4318	1089	16920	4598	1363	16380	4446	1436	15300	4143	1537	14760	3992	1595	
	64	77	13350	3747	742	18236	5030	927	16809	4674	1102	18000	5002	1378	17280	4800	1436	16200	4497	1552	15480	4295	1610	
	66	81	13800	3874	753	18870	5297	938	17443	4896	1114	18720	5255	1392	18000	5053	1450	16920	4750	1552	16200	4547	1610	
	72	86	15300	3832	753	20931	5252	938	19346	4852	1114	20700	5204	1407	19980	5002	1465	18000	4851	1610	16740	4750	1697	
75	90	16350	3832	764	22359	5252	950	20614	4852	1127	22140	5204	1407	21240	5002	1479	18720	4952	1653	17100	4901	1755		

9+12	54	64	12450	3284	744	14906	4629	934	13796	4273	1101	14760	4598	1380	14220	4396	1440	13320	4143	1545	12780	3941	1605
	57	68	12450	3284	744	16016	4629	934	14906	4318	1114	15840	4598	1395	15300	4446	1455	14220	4143	1560	13680	3992	1635
	61	72	12450	3495	756	17126	4629	946	15857	4318	1127	16920	4598	1410	16380	4446	1485	15300	4143	1590	14760	3992	1650
	64	77	13350	3747	767	18236	5030	959	16809	4674	1140	18000	5002	1425	17280	4800	1485	16200	4497	1605	15480	4295	1665
	66	81	13800	3874	779	18870	5297	971	17443	4896	1153	18720	5255	1440	18000	5053	1500	16920	4750	1605	16200	4547	1665
	72	86	15300	3832	779	20931	5252	971	19346	4852	1153	20700	5204	1455	19980	5002	1515	18000	4851	1665	16740	4750	1755
75	90	16350	3832	791	22359	5252	983	20614	4852	1166	22140	5204	1455	21240	5002	1530	18720	4952	1710	17100	4901	1815	
12+12	54	64	12450	3284	744	14906	4629	934	13796	4273	1101	14760	4598	1380	14220	4396	1440	13320	4143	1545	12780	3941	1605
	57	68	12450	3284	744	16016	4629	934	14906	4318	1114	15840	4598	1395	15300	4446	1455	14220	4143	1560	13680	3992	1635
	61	72	12450	3495	756	17126	4629	946	15857	4318	1127	16920	4598	1410	16380	4446	1485	15300	4143	1590	14760	3992	1650
	64	77	13350	3747	767	18236	5030	959	16809	4674	1140	18000	5002	1425	17280	4800	1485	16200	4497	1605	15480	4295	1665
	66	81	13800	3874	779	18870	5297	971	17443	4896	1153	18720	5255	1440	18000	5053	1500	16920	4750	1605	16200	4547	1665
	72	86	15300	3832	779	20931	5252	971	19346	4852	1153	20700	5204	1455	19980	5002	1515	18000	4851	1665	16740	4750	1755
75	90	16350	3832	791	22359	5252	983	20614	4852	1166	22140	5204	1455	21240	5002	1530	18720	4952	1710	17100	4901	1815	
RATED CAPACITY			18000																				
MAX. CAPACITY			20500																				
RATED INPUT			1,440																				
MAX. INPUT			1,550																				
RATED COP			12,500																				
RATED COMP.RPM			4,200																				
COMP. RPM (48 C)			4,200																				
COMP. RPM (43 C)			4,200																				
COMP. RPM (30 C BELOW)			3,700																				
COMP. RPM (10 C BELOW)			3,500																				

EWB : Evaporator Wet Bulb temperature (°F)

EDB : Evaporator Dry Bulb temperature (°F)

(°FDB) : Outdoor Unit Inlet Air Dry Temperature (°F)

TC : Total Capacity (Btu)

SHC : Sensible Heating Capacity (Btu)

PI : Power Input (W)

HEATING [60Hz, 230V]

	INDOOR		OUTDOOR TEMPERATURE (°CDB)																												
	°F	EDB	5				14				19				23				32				45				59				
			TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI		
RAM-G18N2HAA	61	11195	0	1447	13601	0	1486	15044	0	1544	16006	0	1591	18412	0	1781	21780	0	1804	22502	0	1853	23705	0	1945						
	64	11251	0	1466	13669	0	1505	15120	0	1576	16087	0	1632	18505	0	1826	21890	0	1896	22615	0	1935	23872	0	1955						
	68	11308	0	1486	13738	0	1525	15196	0	1601	16168	0	1662	18598	0	1857	22000	0	1955	22729	0	1955	23944	0	1955						
	72	11365	0	1505	13807	0	1544	15272	0	1633	16249	0	1705	18691	0	1902	22044	0	1955	22774	0	1955	23992	0	1955						
	75	11421	0	1525	13875	0	1564	15348	0	1665	16330	0	1746	18784	0	1947	22088	0	1955	22820	0	1955	24040	0	1955						
7.0	61	4580	0	533	5564	0	547	6155	0	569	6548	0	586	7532	0	656	8910	0	665	9927	0	683	11457	0	716						
	64	4603	0	540	5592	0	554	6186	0	580	6581	0	601	7570	0	672	8955	0	698	9891	0	713	9766	0	750						
	68	4626	0	547	5620	0	562	6217	0	590	6614	0	612	7608	0	684	9000	0	720	9298	0	720	9795	0	720						
	72	4649	0	554	5646	0	569	6248	0	602	6647	0	628	7646	0	701	9018	0	720	9317	0	720	9815	0	720						
	75	4672	0	562	5676	0	576	6279	0	613	6680	0	643	7684	0	717	9036	0	720	9335	0	720	9834	0	720						
9.0	61	5903	0	725	7172	0	745	7933	0	774	8440	0	798	9708	0	893	11484	0	905	12795	0	929	14767	0	975						
	64	5933	0	735	7208	0	755	7973	0	790	8482	0	818	9757	0	915	11542	0	951	12748	0	970	12587	0	1021						
	68	5963	0	745	7244	0	764	8013	0	802	8525	0	833	9806	0	931	11600	0	980	11984	0	980	12625	0	980						
	72	5993	0	755	7280	0	774	8053	0	819	8568	0	855	9855	0	954	11623	0	980	12008	0	980	12650	0	980						
	75	6023	0	764	7316	0	784	8093	0	835	8610	0	875	9904	0	976	11646	0	980	12032	0	980	12676	0	980						
12.0	61	7811	0	925	9490	0	950	10497	0	988	11168	0	1018	12846	0	1139	15197	0	1154	16931	0	1185	19541	0	1244						
	64	7851	0	938	9538	0	963	10550	0	1008	11225	0	1044	12911	0	1168	15273	0	1213	16870	0	1238	16656	0	1303						
	68	7890	0	950	9586	0	975	10603	0	1024	11281	0	1063	12976	0	1188	15350	0	1250	15859	0	1250	16706	0	1250						
	72	7929	0	963	9634	0	988	10656	0	1045	11337	0	1090	13041	0	1216	15381	0	1250	15891	0	1250	16739	0	1250						
	75	7969	0	975	9682	0	1000	10709	0	1064	11394	0	1116	13106	0	1245	15411	0	1250	15922	0	1250	16773	0	1250						
7+7	61	9159	0	999	11128	0	1026	12309	0	1067	13097	0	1099	15065	0	1230	17820	0	1246	19854	0	1280	22914	0	1343						
	64	9206	0	1013	11184	0	1040	12371	0	1088	13163	0	1127	15141	0	1261	17910	0	1310	19782	0	1337	19531	0	1407						
	68	9252	0	1026	11240	0	1053	12433	0	1106	13229	0	1148	15217	0	1283	18000	0	1350	18596	0	1350	19590	0	1350						
	72	9298	0	1040	11296	0	1067	12495	0	1128	13295	0	1177	15293	0	1314	18036	0	1350	18633	0	1350	19629	0	1350						
	75	9345	0	1053	11352	0	1080	12557	0	1150	13361	0	1206	15369	0	1345	18672	0	1350	18670	0	1350	19668	0	1350						
7+9	61	10483	0	1073	12735	0	1102	14087	0	1145	14988	0	1180	17241	0	1321	20394	0	1338	22722	0	1375	26224	0	1443						
	64	10536	0	1088	12800	0	1117	14158	0	1169	15063	0	1211	17328	0	1354	20497	0	1407	22639	0	1436	22633	0	1511						
	68	10589	0	1102	12864	0	1131	14229	0	1188	15139	0	1233	17415	0	1378	20600	0	1450	21283	0	1450	22420	0	1450						
	72	10642	0	1117	12928	0	1146	14300	0	1212	15215	0	1264	17502	0	1411	20641	0	1450	21326	0	1450	22465	0	1450						
	75	10695	0	1131	12993	0	1160	14371	0	1235	15290	0	1295	17589	0	1444	20682	0	1450	21368	0	1450	22510	0	1450						
7+12	61	11195	0	1221	13601	0	1254	15044	0	1303	16006	0	1343	18412	0	1503	21780	0	1523	24266	0	1564	28006	0	1642						
	64	11251	0	1238	13669	0	1271	15120	0	1330	16087	0	1378	18505	0	1541	21890	0	1601	24178	0	1634	23872	0	1719						
	68	11308	0	1254	13738	0	1287	15196	0	1351	16168	0	1403	18598	0	1568	22000	0	1650	22729	0	1650	23944	0	1650						
	72	11365	0	1271	13807	0	1304	15272	0	1379	16249	0	1439	18691	0	1605	22044	0	1650	22774	0	1650	23992	0	1650						
	75	11421	0	1287	13875	0	1320	15348	0	1405	16330	0	1473	18784	0	1643	22088	0	1650	22820	0	1650	24040	0	1650						
9+9	61	11195	0	1125	13601	0	1155	15044	0	1201	16006	0	1237	18412	0	1385	21780	0	1403	24266	0	1441	28006	0	1512						
	64	11251	0	1140	13669	0	1170	15120	0	1225	16087	0	1269	18505	0	1420	21890	0	1474	24178	0	1505	23872	0	1584						
	68	11308	0	1155	13738	0	1186	15196	0	1245	16168	0	1292	18598	0	1444	22000	0	1520	22729	0	1520	23944	0	1520						
	72	11365	0	1170	13807	0	1201	15272	0	1270	16249	0	1325	18691	0	1479	22044	0	1520	22774	0	1520	23992	0	1520						
	75	11421	0	1186	13875	0	1216	15348	0	1294	16330	0	1357	18784	0	1514	22088	0	1520	22820	0	1520	24040	0	1520						
9+12	61	11195	0	1221	13601	0	1254	15044	0	1303	16006	0	1343	18412	0	1503	21780	0	1523	24266	0	1564	28006	0	1642						
	64	11251	0	1238	13669	0	1271	15120	0	1330	16087	0	1378	18505	0	1541	21890	0	1601	24178	0	1634	23872	0	1719						
	68	11308	0	1254	13738	0	1287	15196	0	1351	16168	0	1403	18598	0	1568	22000	0	1650	22729	0	1650	23944	0	1650						
	72	11365	0	1271	13807	0	1304	15272	0	1379	16249	0	1439	18691	0	1605	22044	0	1650	22774	0	1650	23992	0	1650						
	75	11421	0	1287	13875																										

3.2.2 RAM-G24N3HAA

COOLING [60Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																				
		14			70			81			90			95			104			109		
EWB	EDB	-10			21			27			32			35			40			43		
*F	*F	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
RAM-G24N3HAA																						
54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761	1843	17760	5430	1978	17040	5165	2054
57	68	16405	4254	941	21103	5996	1181	19640	5992	1409	21120	6026	1786	20400	5827	1862	18960	5430	1997	18240	5231	2093
61	72	16405	4526	956	22566	5996	1197	20894	5992	1425	22560	6026	1805	21840	5827	1901	20400	5430	2035	19680	5231	2112
64	77	17591	4854	971	24028	6515	1213	22148	6053	1442	24000	6556	1824	23040	6291	1901	21600	5894	2054	20640	5629	2131
66	81	18184	5017	985	24864	6860	1228	22984	6342	1458	24960	6887	1843	24000	6291	1901	22560	6225	2054	21600	5960	2131
72	86	20160	4963	985	27580	6803	1228	25491	6284	1458	27600	6821	1862	26640	6556	1939	24000	6357	2131	22320	6225	2246
75	90	21544	4963	1000	29461	6803	1244	27162	6284	1474	29520	6821	1862	28320	6556	1958	24960	6490	2189	22800	6423	2323
7.0																						
54	64	4785	1241	221	5728	1749	277	5302	1614	326	5740	1758	414	5530	1680	432	5180	1584	464	4970	1507	482
57	68	4785	1241	221	6155	1749	277	5728	1631	330	6160	1758	419	5950	1700	437	5530	1584	468	5320	1526	491
61	72	4785	1320	224	6582	1749	281	6094	1631	334	6580	1758	423	6370	1700	446	5950	1584	477	5740	1526	495
64	77	5131	1416	227	7008	1900	284	6460	1766	338	7000	1912	428	6720	1835	446	6300	1719	482	6020	1642	500
66	81	5304	1463	231	7252	2001	288	6704	1850	342	7280	2009	432	7000	1931	450	6580	1816	482	6300	1738	500
72	86	5880	1447	231	8044	1984	288	7435	1833	342	8050	1989	437	7770	1912	455	7000	1854	500	6510	1816	527
75	90	6284	1447	234	8593	1984	291	7922	1833	346	8610	1989	437	8260	1912	459	7280	1893	513	6650	1873	545
9.0																						
54	64	6152	1595	319	7365	2248	400	6817	2075	411	7380	2260	506	7110	2160	624	6660	2036	670	6390	1937	696
57	68	6152	1595	319	7914	2248	400	7365	2097	477	7920	2260	605	7650	2185	631	7110	2036	676	6840	1962	709
61	72	6152	1697	324	8462	2248	405	7835	2097	482	8460	2260	611	8190	2185	644	7550	2036	689	7380	1962	715
64	77	6596	1820	329	9011	2443	410	8305	2270	488	9000	2458	618	8640	2359	644	8100	2210	696	7740	2111	722
66	81	6819	1881	334	9324	2573	416	8619	2378	494	9360	2583	624	9000	2483	650	8460	2334	696	8100	2235	722
72	86	7560	1861	334	10343	2551	416	9559	2356	494	10350	2558	631	9990	2458	657	9000	2384	722	8370	2334	761
75	90	8079	1861	339	11048	2551	421	10186	2356	499	11070	2558	631	10620	2458	663	9360	2434	741	8550	2409	787
12.0																						
54	64	8202	2127	505	9820	2998	634	9089	2767	747	9840	3013	948	9480	2881	989	8880	2715	1061	8520	2583	1102
57	68	8202	2127	505	10552	2998	634	9820	2796	758	10560	3013	958	10200	2914	999	9480	2715	1071	9120	2616	1123
61	72	8202	2263	513	11283	2998	642	10447	2796	765	11280	3013	968	10920	2914	1020	10200	2715	1092	9840	2616	1133
64	77	8795	2427	521	12014	3257	650	11074	3027	773	12000	3278	979	11520	3145	1020	10800	2947	1102	10320	2814	1143
66	81	9092	2509	529	12432	3430	659	11492	3171	782	12480	3443	989	12000	3311	1030	11280	3112	1102	10800	2890	1143
72	86	10080	2481	529	13790	3401	659	12745	3142	782	13800	3410	999	13320	3278	1040	12000	3179	1143	11160	3112	1205
75	90	10772	2481	536	14730	3401	667	13581	3142	791	14760	3410	999	14160	3278	1051	12480	3245	1143	11400	3212	1246
18.0																						
54	64	12304	3190	784	14730	4497	985	13633	4151	1160	14760	4520	1472	14220	4321	1536	13320	4073	1648	12780	3874	1712
57	68	12304	3190	784	15827	4497	985	14730	4194	1174	15840	4520	1488	15300	4371	1552	14220	4073	1664	13680	3924	1744
61	72	12304	3395	797	16924	4497	997	15671	4194	1188	16920	4520	1504	16380	4371	1584	15300	4073	1696	14760	3924	1760
64	77	13193	3640	809	18021	4886	1010	16611	4540	1201	18000	4917	1520	17280	4718	1584	16200	4420	1712	15480	4222	1776
66	81	13638	3763	821	18648	5145	1023	17238	4756	1215	18720	5165	1536	18000	4967	1600	16920	4669	1712	16200	4470	1776
72	86	15120	3722	821	20685	5102	1023	19118	4713	1215	20700	5116	1552	19980	4917	1616	18000	4768	1776	16740	4669	1872
75	90	16158	3722	833	22096	5102	1036	20372	4713	1229	22140	5116	1552	21240	4917	1632	18720	4867	1824	17100	4818	1936
7+7																						
54	64	9569	2481	613	11457	3497	769	10604	3228	907	11480	3515	1150	11060	3361	1200	10360	3168	1288	9940	3013	1338
57	68	9569	2481	613	12310	3497	769	11457	3262	917	12320	3515	1163	11900	3399	1213	11060	3168	1300	10640	3052	1363
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64	77	10261	2831	632	14016	3800	789	12920	3531	938	14000	3824	1188	13440	3670	1238	12600	3438	1338	12040	3283	1388
66	81	10607	2927	641	14504	4002	800	13407	3699	949	14560	4017	1200	14000	3863	1250	13160	3631	1338	12600	3477	1388
72	86	11760	2895	641	16088	3968	800	14870	3666	949	16100	3979	1213	15540	3824	1263	14000	3708	1388	13020	3631	1463
75	90	12567	2895	651	17185	3968	810	15845	3666	960	17220	3979	1213	16520	3824	1275	14560	3786	1425	13300	3747	1513
7+9																						
54	64	10936	2836	711	13094	3997	892	12119	3690	1062	13120	4017	1334	12640	3841	1392	11840	3620	1494	11360	3443	1552
57	68	10936	2836	711	14069	3997	892	13094	3728	1076	14080	4017	1349	13600	3885	1407	12640	3620	1508	12160	3488	1581
61	72	10936	3018	722	15044	3997	904	13929	3728	1076	15040	4017	1363	14560	3885	1436	13600	3620	1537	13120	3488	1595
64	77	11727	3236	733	16019	4343	916	14765	4036	1089	16000	4371	1378	15360	4194	1436	14400	3929	1552	13760	3753	1610
66	81	12122	3345	744	16576	4574	927	15322	4228	1101	16640	4591	1392	16000	4415	1450	15040	4150	1552	14400	3973	1610
72	86	13440	3308	744	18387	4535	927	16994	4189	1101	18400	4547	1407	17760	4371	1465	16000	4238	1610	14880	4150	1697
75	90	14362	3308	755	19640	4535	939	18108	4189	1113	19680	4547	1407	18880	4371	1479	16640	4326	1653	15200	4282	1755
7+12																						
54	64	12987	3368	784	15549	4747	985	14391	4381	1160	15580	4771	1472	15010	4561	1536	14060	4299	1648	13490	4089	1712
57	68	12987	3368	784	16707	4747	985	15549	4427	1174	16720	4771	1488	16150	4613	1552	15010	4299	1664	14440	4142	1744
61	72	12987	3583	797	17864	4747	997	16541	4427	1188	17860	4771	1504	17290	4613	1584	16150	4299	1696	15580	4142	1760
64	77	13926	3842	809	19022	5157	1010	17534	4792	1201	19000	5190	1520	18240	4980	1584	17100	4666	1712	16340	4456	1776
66	81	14395	3972	821	19684	5431	1023	18195	5020	1215	19760	5452	1536	19000	5242	1600	17860	4928	1712	17100	4718	1776
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75	90	17055	3929	833	23323	5386	1036	21504														

CAPACITIES AND SELECTION DATA

9+18	54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761	1843	17760	5430	1978	17040	5165	2054
	57	68	16405	4254	941	21103	5996	1181	19640	5592	1409	21120	6026	1786	20400	5827	1862	18960	5430	1997	18240	5231	2093
	61	72	16405	4526	956	22566	5996	1197	20894	5592	1425	22560	6026	1805	21840	5827	1901	20400	5430	2035	19680	5231	2112
	64	77	17591	4854	971	24028	6515	1213	22148	6053	1442	24000	6556	1824	23040	6291	1901	21600	5894	2054	20640	5629	2131
	66	81	18184	5017	985	24864	6860	1228	22984	6342	1458	24960	6887	1843	24000	6622	1920	22560	6225	2054	21600	5960	2131
72	86	20160	4963	985	27580	6803	1228	25491	6284	1458	27600	6821	1862	26640	6556	1939	24000	6357	2131	22320	6225	2246	
75	90	21544	4963	1000	29461	6803	1244	27162	6284	1474	29520	6821	1862	28320	6556	1958	24960	6490	2189	22800	6423	2323	
12+12	54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761	1843	17760	5430	1978	17040	5165	2054
	57	68	16405	4254	941	21103	5996	1181	19640	5592	1409	21120	6026	1786	20400	5827	1862	18960	5430	1997	18240	5231	2093
	61	72	16405	4526	956	22566	5996	1197	20894	5592	1425	22560	6026	1805	21840	5827	1901	20400	5430	2035	19680	5231	2112
	64	77	17591	4854	971	24028	6515	1213	22148	6053	1442	24000	6556	1824	23040	6291	1901	21600	5894	2054	20640	5629	2131
	66	81	18184	5017	985	24864	6860	1228	22984	6342	1458	24960	6887	1843	24000	6622	1920	22560	6225	2054	21600	5960	2131
72	86	20160	4963	985	27580	6803	1228	25491	6284	1458	27600	6821	1862	26640	6556	1939	24000	6357	2131	22320	6225	2246	
75	90	21544	4963	1000	29461	6803	1244	27162	6284	1474	29520	6821	1862	28320	6556	1958	24960	6490	2189	22800	6423	2323	
12+18	54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761	1843	17760	5430	1978	17040	5165	2054
	57	68	16405	4254	941	21103	5996	1181	19640	5592	1409	21120	6026	1786	20400	5827	1862	18960	5430	1997	18240	5231	2093
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	64	77	17591	4854	971	24028	6515	1213	22148	6053	1442	24000	6556	1824	23040	6291	1901	21600	5894	2054	20640	5629	2131
	66	81	18184	5017	985	24864	6860	1228	22984	6342	1458	24960	6887	1843	24000	6622	1920	22560	6225	2054	21600	5960	2131
72	86	20160	4963	985	27580	6803	1228	25491	6284	1458	27600	6821	1862	26640	6556	1939	24000	6357	2131	22320	6225	2246	
75	90	21544	4963	1000	29461	6803	1244	27162	6284	1474	29520	6821	1862	28320	6556	1958	24960	6490	2189	22800	6423	2323	
18+18	54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761	1843	17760	5430	1978	17040	5165	2054
	57	68	16405	4254	941	21103	5996	1181	19640	5592	1409	21120	6026	1786	20400	5827	1862	18960	5430	1997	18240	5231	2093
	61	72	16405	4526	956	22566	5996	1197	20894	5592	1425	22560	6026	1805	21840	5827	1901	20400	5430	2035	19680	5231	2112
	64	77	17591	4854	971	24028	6515	1213	22148	6053	1442	24000	6556	1824	23040	6291	1901	21600	5894	2054	20640	5629	2131
	66	81	18184	5017	985	24864	6860	1228	22984	6342	1458	24960	6887	1843	24000	6622	1920	22560	6225	2054	21600	5960	2131
72	86	20160	4963	985	27580	6803	1228	25491	6284	1458	27600	6821	1862	26640	6556	1939	24000	6357	2131	22320	6225	2246	
75	90	21544	4963	1000	29461	6803	1244	27162	6284	1474	29520	6821	1862	28320	6556	1958	24960	6490	2189	22800	6423	2323	
7+7+7	54	64	14354	3722	833	17185	5246	1046	15906	4843	1233	17220	5273	1584	16599	5041	1632	15540	4751	1751	14910	4520	1819
	57	68	14354	3722	833	18465	5246	1046	17185	4893	1247	18480	5273	1581	17850	5099	1649	16590	4751	1768	15960	4577	1853
	61	72	14354	3961	846	19745	5246	1060	18282	4893	1262	19740	5273	1598	19110	5099	1683	17850	4751	1802	17220	4577	1870
	64	77	15392	4247	859	21025	5700	1074	19379	5297	1276	21000	5736	1615	20160	5505	1683	18900	5157	1819	18060	4925	1887
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72	86	17640	4342	872	24133	5952	1087	22304	5498	1291	24150	5968	1649	23310	5736	1717	21000	5563	1867	19530	5447	1989	
75	90	18851	4342	885	25778	5952	1101	23767	5498	1305	25830	5968	1649	24780	5736	1734	21840	5678	1938	19950	5620	2057	
7+7+9	54	64	14712	4076	922	18822	5746	1157	17420	5304	1363	18860	5775	1730	18170	5521	1805	17020	5204	1936	16330	4950	2012
	57	68	15721	4076	922	20224	5746	1157	18822	5359	1379	20240	5775	1748	19550	5585	1824	18170	5204	1955	17480	5013	2049
	61	72	15721	4338	936	21625	5746	1172	20024	5359	1395	21620	5775	1767	20930	5585	1861	19550	5204	1993	18860	5013	2068
	64	77	16558	4651	950	23027	6243	1187	21225	5801	1411	23000	6283	1786	22080	6029	1861	20700	5648	2012	19780	5394	2087
	66	81	17426	4808	965	23828	6575	1202	22026	6077	1428	23920	6000	1805	23000	6346	1880	21620	5965	2012	20700	5712	2087
72	86	19320	4756	965	26431	6519	1202	24429	6022	1442	26450	6537	1824	25530	6283	1899	23000	6092	2087	21390	5965	2200	
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7+7+12	54	64	16405	4254	1029	19640	5996	1292	18178	5534	1523	19680	6026	1932	18960	5761	2016	17760	5430	2163	17040	5165	2247
	57	68	16405	4254	1029	21103	5996	1292	19640	5592	1541	21120	6026	1953	20400	5827	2037	18960	5430	2184	18240	5231	2289
	61	72	16405	4526	1045	22566	5996	1309	20894	5592	1559	22560	6026	1974	21840	5827	2079	20400	5430	2226	19680	5231	2310
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	66	81	18184	5017	1078	24864	6860	1343	22984	6342	1595	24960	6887	2016	24000	6622	2100	22560	6225	2247	21600	5960	2331
72	86	20160	4963	1078	27580	6803	1343	25491	6284	1595	27600	6821	2037	26640	6556	2121	24000	6357	2331	22320	6225	2457	
75	90	21544	4963	1094	29461	6803	1360	27162	6284	1613	29520	6821	2037	28320	6556	2142	24960	6490	2394	22800	6423	2541	
7+7+18	54	64	16405	4254	1127	19640	5996	1415	18178	5534	1688	19680	6026	2116	18960	5761	2208	17760	5430	2369	17040	5165	2461
	57	68	16405	4254	1127	21103	5996	1415	19640	5592	1688	21120	6026	2139	20400	5827	2231	18960	5430	2392	18240	5231	2507
	61	72	16405	4526	1145	22566	5996	1434	20894	5592	1707	22560	6026	2162	21840	5827	2277	20400	5430	2438	19680	5231	2530
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	66	81	18184	5017	1180	24864	6860	1471	22984	6342	1746	24960	6887	2208	24000	6622	2300	22560	6225	2461	21600	5960	2553
72	86	20160	4963	1180	27580	6803	1471	25491	6284	1746	27600	6821	2231	26640	6556	2323	24000	6357	2553	22320	6225	2691	
75	90	21544	4963	1198	29461	6803	1490	27162	6284	1766	29520	6821	2231	28320	6556	2346	24960	6490	2622	22800	6423	2783	
7+9+9	54	64	16405	4254	941	19640	5996	1181	18178	5534	1392	19680	6026	1766	18960	5761							

CAPACITIES AND SELECTION DATA

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	57	68	16405	4254	1127	21103	5996	1415	19640	5592	1688	21120	6026	2139	20400	5827	2231	18960	5430	2392	18240	5231	2507
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	66	81	18184	5017	1180	24864	6860	1471	22984	6342	1746	24960	6887	2208	24000	6622	2300	22560	6225	2461	21600	5960	2553
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9-9+18	54	64	16405	4254	1127	19640	5996	1415	18178	5534	1668	19680	6026	2116	18960	5761	2208	17760	5430	2369	17040	5165	2461
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	61	72	16405	4526	1145	22566	5996	1434	20894	5592	1707	22560	6026	2162	21840	5827	2277	20400	5430	2438	19680	5231	2530
	64	77	17591	4854	1163	24028	6515	1453	22148	6053	1727	24000	6556	2185	23040	6291	2277	21600	5894	2461	20640	5629	2553
	66	81	18184	5017	1180	24864	6860	1471	22984	6342	1746	24960	6887	2208	24000	6622	2300	22560	6225	2461	21600	5960	2553
	72	86	20160	4963	1180	27580	6803	1471	25491	6284	1746	27600	6821	2231	26640	6556	2323	24000	6357	2553	22320	6225	2691
9-12+12	54	64	16405	4254	1127	19640	5996	1415	18178	5534	1668	19680	6026	2116	18960	5761	2208	17760	5430	2369	17040	5165	2461
	57	68	16405	4254	1127	21103	5996	1415	19640	5592	1688	21120	6026	2139	20400	5827	2231	18960	5430	2392	18240	5231	2507
	61	72	16405	4526	1145	22566	5996	1434	20894	5592	1707	22560	6026	2162	21840	5827	2277	20400	5430	2438	19680	5231	2530
	64	77	17591	4854	1163	24028	6515	1453	22148	6053	1727	24000	6556	2185	23040	6291	2277	21600	5894	2461	20640	5629	2553
	66	81	18184	5017	1180	24864	6860	1471	22984	6342	1746	24960	6887	2208	24000	6622	2300	22560	6225	2461	21600	5960	2553
	72	86	20160	4963	1180	27580	6803	1471	25491	6284	1746	27600	6821	2231	26640	6556	2323	24000	6357	2553	22320	6225	2691
12-12+12	54	64	16405	4254	1127	19640	5996	1415	18178	5534	1668	19680	6026	2116	18960	5761	2208	17760	5430	2369	17040	5165	2461
	57	68	16405	4254	1127	21103	5996	1415	19640	5592	1688	21120	6026	2139	20400	5827	2231	18960	5430	2392	18240	5231	2507
	61	72	16405	4526	1145	22566	5996	1434	20894	5592	1707	22560	6026	2162	21840	5827	2277	20400	5430	2438	19680	5231	2530
	64	77	17591	4854	1163	24028	6515	1453	22148	6053	1727	24000	6556	2185	23040	6291	2277	21600	5894	2461	20640	5629	2553
	66	81	18184	5017	1180	24864	6860	1471	22984	6342	1746	24960	6887	2208	24000	6622	2300	22560	6225	2461	21600	5960	2553
	72	86	20160	4963	1180	27580	6803	1471	25491	6284	1746	27600	6821	2231	26640	6556	2323	24000	6357	2553	22320	6225	2691
RATED CAPACITY	24000																						
MAX. CAPACITY	28000																						
RATED INPUT	1.920																						
MAX. INPUT	2.820																						
RATED COP	12.50																						
RATED COMP. RPM	4.250																						
COMP. RPM (48 C)	4.250																						
COMP. RPM (43 C)	4.250																						
COMP. RPM (30 C BELOW)	3.700																						
COMP. RPM (10 C BELOW)	3.500																						

EWB : Evaporator Wet Bulb temperature (°F)
 EDB : Evaporator Dry Bulb temperature (°F)
 (°FDB) : Outdoor Unit Inlet Air Dry Temperature (°F)

TC : Total Capacity (Btu)
 SHC : Sensible Heating Capacity (Btu)
 PI : Power Input (W)

HEATING [60Hz, 230V]

	INDOOR		OUTDOOR TEMPERATURE (°CDB)																											
	EDB	°F	5			14			19			23			32			45			50			59						
			TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI				
RAM-G24N3HAA	61	12213	0	1487	14837	0	1527	16412	0	1592	17462	0	1635	20086	0	1830	23760	0	1854	24547	0	1905	25599	0	1999	26424	0	2009		
	64	12275	0	1507	14912	0	1547	16495	0	1625	17550	0	1678	20187	0	1878	23880	0	1949	24671	0	1989	26042	0	2009	26121	0	2009		
	68	12336	0	1527	14987	0	1567	16578	0	1651	17638	0	1708	20289	0	1909	24000	0	2009	24795	0	2009	26121	0	2009	26173	0	2009		
	72	12398	0	1547	15062	0	1587	16661	0	1686	17726	0	1752	20390	0	1955	24048	0	2009	24844	0	2009	26225	0	2009	26277	0	2009		
	75	12460	0	1567	15137	0	1607	16744	0	1719	17814	0	1794	20492	0	2001	24096	0	2009	24894	0	2009	26277	0	2009	26329	0	2009		
7.0	61	4580	0	533	5564	0	547	6154	0	571	6548	0	586	7532	0	656	8910	0	665	9927	0	683	11457	0	716	12175	0	750		
	64	4603	0	540	5592	0	554	6186	0	582	6581	0	601	7570	0	672	8955	0	698	9891	0	713	11457	0	750	12175	0	750		
	68	4626	0	547	5620	0	562	6217	0	592	6614	0	612	7608	0	684	9000	0	720	9927	0	720	11457	0	750	12175	0	750		
	72	4649	0	554	5648	0	569	6248	0	604	6647	0	628	7646	0	701	9018	0	720	9917	0	720	11457	0	750	12175	0	750		
	75	4672	0	562	5676	0	576	6279	0	616	6680	0	643	7684	0	717	9036	0	720	9935	0	720	11457	0	750	12175	0	750		
9.0	61	5903	0	725	7171	0	745	7932	0	777	8440	0	798	9708	0	893	11484	0	905	12795	0	929	14767	0	975	15473	0	1021		
	64	5933	0	735	7208	0	755	7973	0	793	8482	0	818	9757	0	915	11542	0	951	12748	0	970	14587	0	1021	15473	0	1021		
	68	5963	0	745	7244	0	764	8013	0	806	8525	0	833	9806	0	931	11600	0	980	11984	0	980	12625	0	980	15473	0	980		
	72	5992	0	755	7280	0	774	8053	0	822	8568	0	855	9855	0	954	11623	0	980	12008	0	980	12625	0	980	15473	0	980		
	75	6022	0	764	7316	0	784	8093	0	839	8610	0	875	9904	0	976	11646	0	980	12032	0	980	12675	0	980	15473	0	980		
12.0	61	7811	0	851	9490	0	874	10497	0	911	11168	0	936	12847	0	1048	15197	0	1061	16931	0	1090	19541	0	1144	20179	0	1198		
	64	7851	0	863	9538	0	886	10550	0	930	11225	0	960	12912	0	1074	15273	0	1116	16870	0	1139	16656	0	1198	20179	0	1198		
	68	7890	0	874	9586	0	897	10603	0	945	11281	0	978	12976	0	1093	15350	0	1150	15899	0	1150	16706	0	1150	20179	0	1150		
	72	7930	0	886	9634	0	909	10656	0	965	11337	0	1003	13041	0	1119	15381	0	1150	15890	0	1150	16740	0	1150	20179	0	1150		
	75	7969	0	897	9681	0	920	10709	0	984	11394	0	1027	13106	0	1145	15411	0	1150	15922	0	1150	16773	0	1150	20179	0	1150		
18.0	61	10432	0	1443	12674	0	1482	14019	0	1545	14915	0	1587	17147	0	1776	20295	0	1800	22612	0	1849	26097	0	1940	26727	0	2032		
	64	10485	0	1463	12738	0	1502	14089	0	1578	14991	0	1628	17243	0	1821	20398	0	1892	22530	0	1931	22244	0	1999	26727	0	2032		
	68	10537	0	1482	12802	0	1521	14160	0	1603	15066	0	1658	17330	0	1853	20500	0	1950	21779	0	1950	22311	0	1950	26727	0	1950		
	72	10590	0	1502	12866	0	1541	14231	0	1636	15141	0	1700	17417	0	1897	20541	0	1950	21222	0	1950	22356	0	1950	26727	0	1950		
	75	10643	0	1521	12930	0	1560	14302	0	1669	15217	0	1741	17503	0	1942	20682	0	1950	21264	0	1950	22401	0	1950	26727	0	1950		
7-7	61	9160	0	1110	11128	0	1140	12309	0	1189	13096	0	1221	15064	0	1367	17820	0	1385	19854	0	1422	22914	0	1493	23544	0	1563		
	64	9206	0	1125	11184	0	1155	12371	0	1214	13162	0	1253	15141	0	1401	17910	0	1455	19782	0	1483	19532	0	1563	23544	0	1563		
	68	9252	0	1140	11240	0	1170	12433	0	1233	13229	0	1275	15217	0	1425	18000	0	1500	18596	0	1500	19590	0	1500	23544	0	1500		
	72	9299	0	1155	11297	0	1185	12495	0	1259	13295	0	1309	15293	0	1460	18036	0	1500	18634	0	1500	19630	0	1500	23544	0	1500		
	75	9345	0	1170	11353	0	1200	12558	0	1284	13361	0	1340	15369	0	1494	18072	0	1500	18671	0	1500	19669	0	1500	23544	0	1500		
7-9	61	10483	0	1295	12735	0	1330	14087	0	1387	14988	0	1425	17240	0	1594	20394	0	1615	22722	0	1659	26224	0	1741	26954	0	1824		
	64	10536	0	1313	12800	0	1348	14158	0	1416	15064	0	1461	17328	0	1635	20497	0	1698	22639	0	1733	22363	0	1824	26954	0	1824		
	68	10589	0	1330	12854	0	1365	14229	0	1439	15139	0	1489	17415	0	1663	20600	0	1750	21283	0	1750	22420	0	1824	26954	0	1824		
	72	10642	0	1348	12908	0	1383	14300	0	1469	15215	0	1526	17502	0	1703	20641	0	1750	21325	0	1750	22466	0	1824	26954	0	1824		
	75	10695	0	1365	12963	0	1400	14372	0	1498	15291	0	1563	17589	0	1743	20682	0	1750	21368	0	1750	22510	0	1824	26954	0	1824		
7-12	61	12213	0	1443	14837	0	1482	16412	0	1545	17462	0	1587	20086	0	1776	23760	0	1800	26472	0	1849	30552	0	1940	31182	0	2032		
	64	12275	0	1463	14912	0	1502	16495	0	1578	17550	0	1628	20187	0	1821	23880	0	1892	26376	0	1931	26042	0	1999	31182	0	2032		
	68	12336	0	1482	14987	0	1521	16578	0	1603	17638	0	1658	20289	0	1853	24000	0	1950	24795	0	1950	26121	0	1950	31182	0	1950		
	72	12398	0	1502	15062	0	1541	16661	0	1636	17726	0	1700	20390	0	1897	24048	0	1950	24845	0	1950	26173	0	1950	31182	0	1950		
	75	12460	0	1521	15137	0	1560	16744	0	1669	17814	0	1741	20492	0	1942	24096	0	1950	24894	0	1950	26225	0	1950	31182	0	1950		
7-18	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466	31182	0	2466		
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582	31182	0	2582		
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478	31182	0	2478		
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478	31182	0	2478		
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478	31182	0	2478		
9-9	61	11806	0	1443	14343	0	1482	15865	0	1545	16880	0	1587	19416	0	1776	22968	0	1800	25990	0	1849	29534	0	1940	30164	0	2032		
	64	11866	0	1463	14415	0	1502	15945	0	1578	16965	0	1628	19515	0	1821	23084	0	1892	25497	0	1931	25174	0	1999	30164	0	2032		
	68	11925	0	1482	14488	0	1521	16025	0	1603	17050	0	1658	19613	0	1853	23200	0	1950	23969	0	1950	25250	0	1950	30164	0	1950		
	72	11985	0	1502	14560	0	1541	16105	0	1636	17135	0	1700	19711	0	1897	23246	0	1950	24017	0	1950	25300	0	1950	30164	0	1950		
	75	12045	0	1521	14633	0	1560	16185	0	1669	17221	0	1741	19809	0	1942	23293	0	1950	24065	0	1950	25351	0	1950	30164	0	1950		
9-12	61	12213	0	1517	14837	0	1558	16412	0	1624	17462	0	1669	20086	0	1868	23760	0	1892	26472										

3-10 CAPACITIES AND SELECTION DATA

7+9+9	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
7+9+12	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
7+9+18	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
7+12+12	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
9+9+9	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
9+9+12	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
9+9+18	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
9+12+12	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
12+12+12	61	12213	0	1834	14837	0	1883	16412	0	1964	17462	0	2017	20086	0	2257	23760	0	2287	26472	0	2349	30552	0	2466
	64	12275	0	1859	14912	0	1908	16495	0	2005	17550	0	2069	20187	0	2314	23880	0	2404	26376	0	2453	26042	0	2582
	68	12336	0	1883	14987	0	1933	16578	0	2037	17638	0	2106	20289	0	2354	24000	0	2478	24795	0	2478	26121	0	2478
	72	12398	0	1908	15062	0	1958	16661	0	2080	17726	0	2161	20390	0	2411	24048	0	2478	24845	0	2478	26173	0	2478
	75	12460	0	1933	15137	0	1982	16744	0	2121	17814	0	2213	20492	0	2468	24096	0	2478	24894	0	2478	26225	0	2478
RATED CAPACITY		24000.00																							
MAX. CAPACITY		31500.00																							
RATED INPUT		2.009																							
MAX. INPUT		2.590																							
RATED COP		11.95																							
RATED COMP. RPM		5,200																							
COMP. RPM (46 C)		5,200																							
COMP. RPM (43 C)		5,200																							
COMP. RPM (30 C BELOW)		5,200																							

EWB : Evaporator Wet Bulb temperature (°F)
 EDB : Evaporator Dry Bulb temperature (°F)
 (°FDB) : Outdoor Unit Inlet Air Dry Temperature (°F)

TC : Total Capacity (Btu)
 SHC : Sensible Heating Capacity (Btu)
 PI : Power Input (W)

3.2.3 RAM-G36N4HAA

COOLING [60Hz, 230V]

INDOOR		OUTDOOR TEMPERATURE (°CDW)																												
		14			70			81			90			95			104			109										
		EWB	EDB	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI									
RAM-G36N4HAA		°F	°F																											
		54	64	23240	5926	1389	27824	8352	1743	25752	8888	2780	28440	8498	2880	26540	8009	3090	25560	7619	3270									
		57	68	23240	5926	1389	29896	8352	1743	27824	7790	2079	31680	8888	2790	30600	8595	2910	28440	8009	3120	27360	7716	3270						
		61	72	23240	6305	1411	31968	8352	1766	29600	7790	2103	33840	8888	2820	32760	8595	2970	30600	8009	3180	29520	7716	3300						
		64	77	24920	6761	1432	34040	9075	1789	31376	8433	2127	36000	9670	2850	34560	9279	2970	32400	8693	3210	30960	8302	3330						
		66	81	25760	6989	1454	35224	9557	1812	32560	8834	2151	37440	10158	2880	36000	9768	3000	33840	9181	3210	32400	8791	3330						
		72	86	28560	6913	1454	39072	9477	1812	36112	8754	2151	41400	10061	2910	39960	9670	3030	36000	9377	3330	33480	9181	3510						
		75	90	30520	6913	1476	41736	9477	1835	38480	8754	2176	44280	10061	2910	42480	9670	3060	37440	9572	3420	34200	9474	3630						
	7.0		54	64	4519	1152	208	5410	1624	262	5007	1499	308	5740	1728	414	5530	1652	432	5180	1557	464	4970	1481	482					
			57	68	4519	1152	208	5813	1624	262	5410	1515	312	6160	1728	419	5950	1671	437	5530	1557	468	5320	1500	491					
			61	72	4519	1226	212	6216	1624	265	5756	1515	315	6580	1728	423	6370	1671	446	5950	1557	477	5740	1500	495					
			64	77	4846	1315	215	6619	1765	268	6101	1640	319	7000	1880	428	6720	1804	446	6300	1690	482	6020	1614	500					
		66	81	5009	1359	218	6849	1858	272	6331	1718	323	7280	1975	432	7000	1899	450	6580	1785	482	6300	1709	500						
		72	86	5553	1344	218	7597	1843	272	7022	1702	323	8050	1996	437	7770	1880	455	7000	1823	500	6510	1785	527						
9.0		54	64	5934	1344	221	8115	1843	275	7482	1702	326	8610	1996	437	8260	1880	459	7280	1861	513	6650	1842	545						
		54	64	5810	1481	301	6956	2088	378	6438	1927	445	7380	2222	598	7110	2124	624	6660	2002	670	6390	1905	696						
		61	72	5810	1481	301	7474	2088	378	6956	1948	450	7920	2222	605	7650	2149	631	7110	2002	676	6840	1929	709						
		64	77	6230	1690	310	8510	2269	388	7844	2108	461	9000	2417	618	8640	2320	644	8100	2173	696	7740	2076	722						
		66	81	6440	1747	315	8806	2389	393	8140	2209	466	9360	2540	624	9000	2442	650	8480	2295	696	8100	2198	722						
		72	86	7140	1728	315	9768	2369	393	9028	2188	466	10350	2515	631	9990	2417	657	9000	2344	722	8370	2295	761						
12.0		54	64	7747	1975	477	9275	2784	599	8584	2570	705	9840	2963	948	9480	2633	989	8880	2670	1061	8520	2540	1102						
		57	68	7747	1975	477	9965	2784	599	9275	2597	714	10560	2963	958	10200	2855	999	9480	2670	1071	9120	2572	1123						
		61	72	7747	2102	484	10656	2784	606	9867	2597	722	11280	2963	968	10920	2865	1020	10200	2670	1092	9840	2572	1133						
		64	77	8307	2254	492	11347	3025	614	10459	2811	730	12000	3223	979	11520	3093	1020	10800	2898	1102	10320	2767	1143						
		66	81	8587	2330	499	11741	3186	622	10853	2945	739	12480	3366	989	12000	3256	1030	11280	3060	1102	10800	2930	1143						
		72	86	9520	2304	499	13024	3159	622	12037	2918	739	13800	3354	999	13320	3223	1040	12000	3126	1143	11160	3060	1205						
18.0		54	64	10173	2304	507	13912	3159	630	12827	2918	747	14760	3354	999	14160	3223	1051	12400	3191	1174	11400	3159	1246						
		54	64	11620	2953	741	13912	4176	930	12876	3855	1096	14760	4444	1472	14220	4249	1536	13320	4005	1648	12780	3809	1712						
		57	68	11620	2963	741	14948	4176	930	13912	3895	1109	15840	4444	1488	15300	4298	1552	14220	4005	1664	13680	3858	1744						
		61	72	11620	3153	752	15984	4176	942	14800	3895	1122	16920	4444	1504	16380	4298	1584	15300	4005	1696	14760	3858	1760						
		64	77	12460	3381	764	17020	4538	954	15688	4216	1135	18000	4835	1520	17280	4640	1584	16200	4347	1712	15480	4151	1776						
		66	81	12880	3495	775	17612	4778	967	16280	4417	1147	18720	5079	1536	18000	4884	1600	16920	4591	1712	16200	4395	1776						
24.0		72	86	14280	3457	775	19336	4738	967	18056	4377	1147	20700	5030	1552	19980	4835	1616	18000	4688	1776	16740	4591	1872						
		75	90	15260	3457	787	20868	4738	979	19240	4377	1160	22140	5030	1552	21240	4835	1632	18720	4786	1824	17100	4737	1936						
		54	64	13557	3457	972	16231	4872	1220	15022	4497	1438	17220	5185	1932	16590	4957	2016	15540	4672	2163	14910	4444	2247						
		57	68	13557	3457	972	17439	4872	1220	16231	4544	1455	18480	5185	1953	17850	5014	2037	16590	4672	2184	15960	4501	2289						
		61	72	13557	3678	987	18648	4872	1236	17267	4544	1472	19740	5185	1974	19110	5014	2079	16590	4672	2226	17220	4501	2310						
		64	77	14537	3944	1003	19857	5294	1253	18303	4919	1489	21000	5641	1995	20160	5413	2079	18900	5071	2247	18060	4843	2331						
7+7		66	81	15027	4077	1018	20547	5575	1269	18993	5153	1506	21840	5926	2016	21000	5698	2100	19740	5356	2247	18900	5128	2331						
		72	86	16660	4033	1018	22792	5528	1269	21065	5106	1506	24150	5869	2037	23310	5641	2121	21000	5470	2331	19530	5356	2457						
		75	90	17803	4033	1033	24346	5528	1285	22447	5106	1523	25830	5869	2037	24780	5641	2142	21840	5584	2394	19950	5527	2541						
		54	64	9038	2304	579	10820	3248	726	10015	2998	856	11480	3457	1150	11050	3305	1200	10360	3115	1288	9400	2963	1338						
		57	68	9038	2304	579	11626	3248	726	10820	3029	866	12320	3457	1163	11900	3343	1213	11060	3115	1300	10640	3001	1363						
		61	72	9038	2452	588	12432	3248	736	11511	3029	876	13160	3457	1175	12740	3343	1238	11900	3115	1325	11480	3001	1375						
7+9		64	77	9691	2629	597	13238	3529	746	12202	3279	886	14000	3760	1188	13440	3609	1238	13000	3381	1338	12040	3229	1388						
		66																												

9+9	54	64	11620	2963	718	13912	4176	901	12876	3855	1062	14760	4444	1426	14220	4249	1488	13320	4005	1597	12780	3809	1659
	57	68	11620	2963	718	14948	4176	901	13912	3895	1074	15840	4444	1442	15300	4298	1504	14220	4005	1612	13680	3858	1690
	61	72	11620	3153	729	15984	4176	913	14800	3895	1087	16920	4444	1457	16380	4298	1535	15300	4005	1643	14760	3858	1705
	64	77	12460	3381	740	17020	4538	924	15688	4216	1099	18000	4835	1473	17280	4640	1535	16200	4347	1659	15480	4151	1721
	66	81	12860	3495	751	17612	4778	936	16280	4417	1112	18720	5079	1488	18000	4884	1550	16920	4591	1659	16200	4395	1721
9+12	72	86	14280	3457	751	19536	4738	936	18056	4377	1112	20700	5030	1504	19980	4835	1566	18000	4688	1721	16740	4591	1814
	75	90	15260	3457	762	20868	4738	948	19240	4377	1124	22140	5030	1504	21240	4835	1581	18720	4786	1767	17100	4737	1876
	54	64	13557	3457	787	16231	4872	988	15022	4497	1164	17220	5185	1564	16590	4957	1632	15540	4672	1751	14910	4444	1819
	57	68	13557	3457	787	17439	4872	988	16231	4544	1178	18480	5185	1581	17850	5014	1649	16590	4672	1768	15960	4501	1853
	61	72	13557	3678	799	18648	4872	1001	17267	4544	1192	19740	5185	1598	19110	5014	1683	17850	4672	1802	17220	4501	1870
9+18	64	77	14537	3944	812	19857	5294	1014	18303	4919	1205	21000	5641	1615	20160	5413	1683	18900	5071	1819	18060	4843	1887
	66	81	15027	4077	824	20547	5575	1027	18993	5183	1219	21840	5926	1632	21000	5698	1700	19740	5356	1819	18900	5128	1887
	72	86	16660	4033	824	22792	5528	1027	21065	5106	1219	24150	5869	1649	23310	5641	1717	21000	5470	1887	19530	5356	1989
	75	90	17803	4033	836	24346	5528	1040	22447	5106	1233	25830	5869	1649	24780	5641	1734	21840	5584	1938	19950	5527	2057
	54	64	17430	4444	1120	20868	6264	1406	19314	5782	1657	22140	6666	2226	21330	6373	2323	19800	6007	2493	19170	5714	2589
9+24	57	68	17430	4444	1120	22422	6264	1406	20868	5843	1677	23760	6666	2251	22950	6447	2347	21330	6007	2517	20520	5787	2638
	61	72	17430	4729	1138	23976	6264	1425	22200	5843	1696	25380	6666	2275	24570	6447	2396	22950	6007	2565	22140	5787	2662
	64	77	18690	5071	1155	25530	6806	1443	23532	6324	1716	27000	7252	2399	25920	6959	2396	24300	6520	2589	23220	6227	2686
	66	81	19320	5242	1173	26418	7168	1462	24420	6626	1735	28800	7619	2323	27000	7326	2420	25380	6886	2589	24300	6593	2686
	72	86	21420	5195	1173	29304	7107	1462	27084	6555	1735	31050	7545	2347	29970	7252	2444	27000	7033	2686	25110	6886	2831
12+12	75	90	22890	5195	1190	31302	7107	1480	28860	6555	1755	33210	7545	2347	31860	7252	2468	28080	7179	2759	25650	7106	2928
	54	64	21303	5432	1213	25505	7656	1523	23606	7067	1794	27060	8148	2410	26070	7790	2515	24420	7342	2699	23430	6984	2903
	57	68	21303	5432	1213	27405	7656	1523	25505	7141	1816	29040	8148	2437	28050	7879	2541	26070	7342	2725	25080	7073	2856
	61	72	21303	5780	1232	29304	7656	1543	27133	7141	1837	31020	8148	2463	30030	7879	2594	28050	7342	2777	27060	7073	2882
	64	77	22843	6198	1251	31203	8319	1563	28761	7730	1868	33000	8864	2489	31680	8506	2594	29700	7969	2830	28380	7611	2908
12+18	66	81	23613	6407	1270	32289	8761	1583	29847	8098	1879	34320	9312	2515	33000	8954	2620	31020	8416	2803	29700	8058	2908
	72	86	26180	6337	1270	35816	8687	1583	33103	8024	1879	37950	9222	2541	36630	8864	2646	33000	8596	2908	30690	8416	3065
	75	90	27977	6337	1289	38258	8687	1603	35273	8024	1890	40590	9222	2541	38940	8864	2672	34320	8774	2987	31350	8665	3170
	54	64	15493	3950	880	18549	5568	1104	17168	5140	1301	19680	5926	1748	18960	5655	1824	17760	5340	1957	17040	5079	2033
	57	68	15493	3950	880	19931	5568	1104	18549	5193	1317	21120	5926	1767	20400	5730	1843	18960	5340	1976	18240	5174	2071
12+24	61	72	15493	4204	893	21312	5568	1119	19733	5193	1332	22560	5926	1786	21840	5730	1881	20400	5340	2014	19680	5144	2090
	64	77	16613	4508	907	22693	6050	1133	20917	5622	1347	24000	6447	1805	23040	6186	1881	21400	5795	2033	20640	5535	2109
	66	81	17173	4659	921	23483	6371	1148	21707	5889	1363	24960	6772	1824	24000	6512	1900	22560	6121	2033	21600	5861	2109
	72	86	19040	4609	921	26048	6318	1148	24075	5836	1363	27600	6707	1843	26640	6447	1919	24900	6251	2109	23220	6121	2223
	75	90	20347	4609	935	27824	6318	1162	25653	5836	1378	29520	6707	1843	28320	6447	1938	26000	6381	2166	24200	6316	2299
18+18	54	64	19367	4938	1157	23187	6960	1453	21460	6425	1712	24600	7407	2300	23700	7081	2400	22200	6674	2575	21300	6349	2675
	57	68	19367	4938	1157	24913	6960	1453	23187	6492	1732	26400	7407	2325	25500	7163	2425	23700	6674	2600	22800	6430	2725
	61	72	19367	5255	1175	26640	6960	1472	24867	6492	1753	28200	7407	2350	27300	7163	2475	25500	6674	2650	24600	6430	2750
	64	77	20767	5634	1194	28367	7563	1491	26147	7027	1773	30000	8058	2375	28800	7733	2475	27000	7244	2675	25800	6919	2775
	66	81	21467	5824	1212	29353	7964	1510	27133	7362	1793	31200	8465	2400	30000	8140	2500	28000	7651	2675	27000	7326	2775
18+24	72	86	23800	5761	1212	32560	7897	1510	30093	7295	1793	34500	8384	2425	33300	8058	2525	30000	7814	2773	27900	7651	2925
	75	90	25433	5761	1230	34780	7897	1529	32067	7295	1813	36900	8384	2425	35400	8058	2550	31200	7977	2850	28500	7895	3025
	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26640	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
22+24	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10158	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
	75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485
	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26640	8009	2966	25560	7619	3082
24+24	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10158	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
7+7+7	75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480								

7+7+9	54	64	14848	3786	870	17776	5336	1093	16453	4926	1288	18860	5679	1730	18170	5429	1805	17020	5117	1936	16330	4867	2012
	57	68	14848	3786	870	19100	5336	1093	17776	4977	1303	20240	5679	1748	19550	5492	1824	18170	5117	1995	17480	4930	2049
	61	72	14848	4028	884	20424	5336	1107	18911	4977	1318	21620	5679	1767	20930	5492	1861	19550	5117	1993	18860	4930	2068
	64	77	15921	4320	898	21748	5798	1121	20046	5388	1333	23000	6178	1786	22080	5928	1861	20700	5554	2012	19780	5304	2087
	66	81	16458	4465	911	22504	6106	1136	20802	5644	1348	23920	6490	1805	23000	6240	1880	21620	5866	2012	20700	5616	2087
7+7+12	72	86	18247	4417	911	24963	6055	1136	23072	5593	1348	26450	6428	1824	25530	6178	1899	23000	5991	2087	21390	5866	2200
	75	90	19499	4417	925	26665	6055	1150	24584	5593	1363	28290	6428	1824	27140	6178	1918	23920	6116	2143	21850	6053	2275
	54	64	16784	4280	1111	20095	6032	1395	18599	5588	1644	21320	6419	2208	20540	6137	2304	19240	5785	2472	18460	5502	2568
	57	68	16784	4280	1111	21592	6032	1395	20095	5626	1663	22880	6419	2232	22100	6208	2328	20540	5785	2496	19760	5573	2616
	61	72	16784	4554	1128	23088	6032	1413	21378	5626	1682	24440	6419	2256	23660	6208	2376	22100	5785	2544	21320	5573	2640
7+7+18	64	77	17998	4883	1146	24584	6554	1431	22660	6090	1702	26000	6984	2280	24960	6202	2376	24000	6278	2568	23260	5996	2664
	66	81	18604	5048	1163	25440	6902	1450	23516	6380	1721	27040	7336	2304	26000	7054	2400	24440	6631	2568	23400	6349	2664
	72	86	20627	4993	1163	28219	6844	1450	26081	6322	1721	29900	7266	2328	28860	6984	2424	26000	6772	2664	24180	6631	2808
	75	90	22042	4993	1180	30143	6844	1468	27791	6322	1740	31980	7266	2328	30680	6984	2448	27040	6913	2736	24700	6843	2904
	54	64	20668	5267	1204	24732	7424	1511	22891	6853	1781	26240	7901	2392	25280	7554	2496	32680	7119	2678	22720	6772	2782
7+7+24	57	68	20668	5267	1204	26574	7424	1511	24732	6925	1802	28160	7901	2418	27200	7640	2522	32520	7119	2704	24320	6859	2834
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	64	77	22151	6010	1241	30258	8067	1551	27890	7496	1844	32000	8595	2470	30720	8248	2574	28800	7727	2782	27250	7380	2886
	66	81	22898	6213	1260	31310	8496	1571	28942	7853	1865	33280	9030	2496	32000	8682	2600	30080	8161	2782	28800	7814	2886
	72	86	25387	6145	1260	34731	8424	1571	32100	7781	1865	36800	8943	2522	35520	8595	2626	32000	8335	2886	29760	8161	3042
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	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26640	8009	2966	25560	7716	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
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	75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485
	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26640	8009	2966	25560	7716	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
7+9+12	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
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	57	68	21949	5596	1204	28235	7888	1511	26278	7387	1802	29520	8395	2418	28900	8118	2522	26860	7564	2704	25840	7288	2834
	61	72	21949	5955	1222	30192	7888	1531	27956	7387	1823	31960	8395	2444	30940	8118	2574	28900	7564	2756	27880	7288	2860
	64	77	23536	6386	1241	32149	8571	1551	29633	7964	1844	34000	9133	2470	32640	8764	2574	30600	8210	2782	29240	7841	2886
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	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
7+12+12	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10061	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
	75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485
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7+12+18	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10061	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
7+12+24	75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485
	54	64	23240	5926	1333	27824</																	

CAPACITIES AND SELECTION DATA

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	57	68	17430	4444	1111	22422	6264	1395	20868	5843	1663	23760	6666	2232	22950	6447	2328	21330	6007	2496	20520	5787	2616
	61	72	17430	4729	1128	23976	6264	1413	22200	5843	1682	25380	6666	2256	24570	6447	2376	21330	6007	2544	22140	5787	2640
	64	77	18690	5071	1146	25530	6806	1431	23532	6324	1702	27000	7252	2280	25920	6999	2376	24300	6520	2568	23220	6227	2664
	66	81	19320	5242	1163	26418	7168	1450	24420	6626	1721	28080	7619	2304	27000	7326	2400	25380	6886	2568	24300	6593	2684
	72	86	21420	5185	1163	29304	7107	1450	27084	6665	1721	31050	7545	2328	29970	7252	2424	27000	7033	2664	25110	6886	2808
9+9-12	54	64	19367	4938	1157	23187	6960	1453	21460	6425	1712	24600	7407	2300	23700	7081	2400	22200	6674	2575	21300	6349	2675
	57	68	19367	4938	1157	24913	6960	1453	23187	6492	1732	26400	7407	2325	25500	7163	2425	23700	6674	2600	22800	6430	2725
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	64	77	20767	5634	1194	28367	7563	1491	26147	7027	1773	30000	8058	2375	28800	7733	2475	27000	7244	2675	25800	6919	2775
	66	81	21467	5824	1212	29353	7964	1510	27133	7362	1793	31200	8465	2400	30000	8140	2500	28200	7651	2675	27000	7326	2775
	72	86	23800	5761	1212	32560	7897	1510	30093	7295	1793	34500	8384	2425	33300	8058	2525	30000	7814	2775	27900	7651	2925
9+9-18	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26640	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
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	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
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	57	68	21303	5432	1204	27405	7656	1511	25505	7147	1802	29040	8148	2418	28050	7879	2522	26070	7342	2704	25080	7073	2834
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	72	86	26180	6337	1260	36816	8687	1571	33103	8024	1865	37950	9222	2522	36630	8864	2626	33000	8595	2866	30690	8416	3042
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	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
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	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
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	57	68	18076	4609	1111	23252	6496	1396	21641	6059	1663	24640	6913	2232	23800	6685	2328	22120	6230	2496	21280	6002	2616
	61	72	18076	4904	1128	24864	6496	1413	23022	6099	1682	26320	6913	2256	25480	6685	2376	23800	6230	2544	22960	6002	2640
	64	77	19382	5259	1146	26476	7058	1431	24404	6559	1702	28000	7521	2280	26880	7217	2376	25200	6761	2568	24080	6457	2664
	66	81	20036	5436	1163	27396	7433	1450	25324	6871	1721	29120	7901	2304	28000	7597	2400	26320	7141	2568	25200	6837	2664
	72	86	22213	5377	1163	30389	7371	1450	28087	6809	1721	32200	7825	2328	31080	7521	2424	28000	7293	2664	26040	7141	2808
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7+7+9	54	64	19367	4938	1157	23187	6960	1453	21460	6425	1712	24600	7407	2300	23700	7081	2400	22200	6674	2575	21300	6349	2675
	57	68	19367	4938	1157	24913	6960	1453	23187	6492	1732	26400	7407	2325	25500	7163	2425	23700	6674	2600	22800	6430	2725
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	64	77	20767	5634	1194	28367	7563	1491	26147	7027	1773	30000	8058	2375	28800	7733	2475	27000	7244	2675	25800	6919	2775
	66	81	21467	5824	1212	29353	7964	1510	27133	7382	1793	31200	8465	2400	30000	8140	2500	28200	7651	2675	27000	7326	2775
	72	86	23800	5761	1212	32560	7897	1510	30093	7295	1793	34500	8384	2425	33300	8058	2525	30000	7814	2775	27900	7651	2925
75	90	25433	5761	1230	34780	7897	1529	32067	7295	1813	36900	8384	2425	35400	8058	2550	31200	7977	2850	28500	7895	3025	
7+7+12	54	64	21303	5432	1204	25055	7656	1511	23606	7067	1781	27060	8148	2392	26070	7790	2496	24420	7342	2670	26300	6984	2782
	57	68	21303	5432	1204	27405	7656	1511	25059	7141	1802	29040	8148	2418	28050	7879	2522	26070	7342	2704	26800	7073	2834
	61	72	21303	5790	1222	29304	7656	1531	27133	7141	1823	31020	8148	2444	30030	7879	2574	28050	7342	2756	27060	7073	2860
	64	77	22843	6198	1241	31203	8319	1551	28761	7730	1844	33000	8864	2470	31680	8506	2574	29700	7969	2782	28380	7611	2886
	66	81	23613	6407	1260	32289	8761	1571	29847	8098	1865	34320	9312	2496	33000	8954	2600	31020	8416	2782	29700	8058	2886
	72	86	26180	6337	1260	36816	8687	1571	33103	8024	1865	37500	9222	2522	36630	8864	2626	33000	8595	2886	30600	8416	3042
75	90	27977	6337	1279	38258	8687	1591	35273	8024	1886	40590	9222	2522	38940	8864	2652	34320	8774	2964	31350	8685	3146	
7+7+18	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26540	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10061	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485	
7+7+24	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26540	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10061	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
7+7+9+9	54	64	20658	5267	1333	24732	7424	1674	22891	6713	1783	26240	7901	2650	25280	7554	2765	23680	7119	2966	22720	6772	3082
	57	68	20658	5267	1333	26574	7424	1674	24732	6925	1976	28160	7901	2678	27200	7640	2794	25280	7119	2995	24320	6859	3139
	61	72	20658	5605	1354	28416	7424	1696	26311	6925	2019	30080	7901	2707	29120	7640	2851	27200	7119	3053	26240	6859	3168
	64	77	22151	6010	1375	30258	8067	1718	27890	7496	2042	32000	8595	2736	30720	8248	2851	28800	7727	3082	27520	7380	3197
	66	81	22998	6213	1396	31310	8495	1740	28942	7853	2065	33260	9030	2765	32000	8682	2880	30080	8161	3082	28800	7614	3197
	72	86	25387	6145	1396	34731	8424	1740	32100	7781	2065	36800	8943	2794	35520	8595	2909	32000	8335	3197	29760	8161	3370
75	90	27129	6145	1417	37089	8424	1762	34204	7781	2089	39360	8943	2794	37760	8595	2938	33280	8509	3283	30400	8422	3485	
7+7+9+12	54	64	22594	5761	1333	27051	8120	1674	25037	7496	1973	28700	8642	2650	27650	8262	2765	25900	7787	2966	24850	7407	3082
	57	68	22594	5761	1333	29066	8120	1674	27051	7574	1996	30800	8642	2678	29750	8357	2794	27650	7787	2995	26600	7502	3139
	61	72	22594	6130	1354	31080	8120	1696	28778	7574	2019	32900	8642	2707	31850	8357	2851	29750	7787	3053	28700	7502	3168
	64	77	24228	6573	1375	33094	8823	1718	30504	8198	2042	35000	9401	2736	33600	9021	2851	31500	8452	3082	30100	8072	3197
	66	81	25044	6795	1396	34246	9292	1740	31656	8589	2065	36400	9876	2765	35000	9496	2880	32800	8926	3082	31500	8547	3197
	72	86	27767	6721	1396	37987	9213	1740	35109	8511	2065	40250	9781	2794	38850	9401	2909	35000	9116	3197	32550	8926	3370
75	90	29672	6721	1417	40577	9213	1762	37411	8511	2089	43050	9781	2794	41300	9401	2938	36400	9306	3283	33250	9211	3485	
7+7+9+18	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26540	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	1996	31680	8888	2678	30600	8595	2794	28440	8009	2995	27360	7716	3139
	61	72	23240	6305	1354	31968	8352	1696	29600	7790	2019	33840	8888	2707	32760	8595	2851	30600	8009	3053	29520	7716	3168
	64	77	24920	6761	1375	34040	9075	1718	31376	8433	2042	36000	9670	2736	34560	9279	2851	32400	8693	3082	30960	8302	3197
	66	81	25760	6989	1396	35224	9557	1740	32560	8834	2065	37440	10158	2765	36000	9768	2880	33840	9181	3082	32400	8791	3197
	72	86	28560	6913	1396	39072	9477	1740	36112	8754	2065	41400	10061	2794	39960	9670	2909	36000	9377	3197	33480	9181	3370
75	90	30520	6913	1417	41736	9477	1762	38480	8754	2089	44280	10061	2794	42480	9670	2938	37440	9572	3283	34200	9474	3485	
7+7+9+24	54	64	23240	5926	1333	27824	8352	1674	25752	7710	1973	29520	8888	2650	28440	8498	2765	26540	8009	2966	25560	7619	3082
	57	68	23240	5926	1333	29896	8352	1674	27824	7790	19												

HEATING [60Hz, 230V]

	INDOOR	OUTDOOR TEMPERATURE (°CDB)																																								
		EDB	5					14					19					23					32					45					50					59				
			°F	TC	SHC	PI		TC	SHC	PI		TC	SHC	PI		TC	SHC	PI		TC	SHC	PI		TC	SHC	PI		TC	SHC	PI		TC	SHC	PI								
RAM-G36N4HA4	61	18320	0	2231	22256	0	2291	24618	0	2389	26193	0	2454	30129	0	2747	36640	0	2783	36821	0	2858	38789	0	3000																	
	64	18412	0	2261	22369	0	2322	24742	0	2438	26325	0	2518	30281	0	2816	35820	0	2925	37007	0	2985	39063	0	3015																	
	68	18505	0	2291	22481	0	2352	24867	0	2478	26457	0	2563	30433	0	2864	36000	0	3015	37193	0	3015	39181	0	3015																	
	72	18597	0	2322	22593	0	2382	24991	0	2530	26589	0	2629	30585	0	2934	36072	0	3015	37267	0	3015	39259	0	3015																	
	75	18690	0	2352	22706	0	2412	25115	0	2580	26722	0	2692	30738	0	3003	36144	0	3015	37342	0	3015	39338	0	3015																	
7.0	61	4580	0	533	5564	0	547	6154	0	571	6548	0	586	7532	0	656	8910	0	665	9927	0	683	11457	0	716																	
	64	4603	0	540	5592	0	554	6186	0	582	6581	0	601	7570	0	672	8955	0	698	9991	0	713	11576	0	750																	
	68	4626	0	547	5620	0	562	6217	0	592	6614	0	612	7608	0	684	9000	0	720	9298	0	720	11676	0	720																	
	72	4649	0	554	5648	0	569	6248	0	604	6647	0	628	7646	0	701	9018	0	720	9317	0	720	11750	0	720																	
	75	4672	0	562	5676	0	576	6279	0	616	6680	0	643	7684	0	717	9036	0	720	9335	0	720	11834	0	720																	
9.0	61	5903	0	725	7171	0	745	7932	0	777	8440	0	798	9708	0	893	11484	0	905	12795	0	929	14767	0	973																	
	64	5933	0	735	7208	0	755	7973	0	793	8482	0	816	9757	0	915	11542	0	951	12748	0	970	14576	0	1021																	
	68	5963	0	745	7244	0	764	8013	0	806	8525	0	833	9806	0	931	11600	0	980	11984	0	980	12625	0	980																	
	72	5992	0	755	7280	0	774	8053	0	822	8568	0	855	9855	0	954	11623	0	980	12008	0	980	12650	0	980																	
	75	6022	0	764	7316	0	784	8093	0	839	8610	0	875	9904	0	976	11646	0	980	12032	0	980	12675	0	980																	
12.0	61	7811	0	851	9490	0	874	10497	0	911	11168	0	936	12847	0	1048	15197	0	1061	16931	0	1090	19541	0	1144																	
	64	7851	0	863	9538	0	886	10550	0	930	11225	0	960	12912	0	1074	15273	0	1116	16870	0	1139	19656	0	1198																	
	68	7890	0	874	9586	0	897	10603	0	945	11281	0	978	12976	0	1093	15350	0	1150	15859	0	1150	19706	0	1150																	
	72	7930	0	886	9634	0	909	10656	0	965	11337	0	1003	13041	0	1119	15381	0	1150	15890	0	1150	19740	0	1150																	
	75	7969	0	897	9681	0	920	10709	0	984	11394	0	1027	13106	0	1145	15411	0	1150	15922	0	1150	19773	0	1150																	
18.0	61	10432	0	1443	12674	0	1482	14019	0	1545	14915	0	1587	17157	0	1776	20295	0	1800	22612	0	1849	26097	0	1940																	
	64	10485	0	1463	12738	0	1502	14089	0	1578	14991	0	1628	17243	0	1821	20398	0	1892	22530	0	1931	22244	0	2032																	
	68	10537	0	1482	12802	0	1521	14160	0	1603	15066	0	1658	17330	0	1853	20500	0	1950	21179	0	1950	22311	0	1950																	
	72	10590	0	1502	12866	0	1541	14231	0	1636	15141	0	1700	17417	0	1897	20541	0	1950	21222	0	1950	22356	0	1950																	
	75	10643	0	1521	12930	0	1560	14302	0	1669	15217	0	1741	17503	0	1942	20582	0	1950	21264	0	1950	22401	0	1950																	
24.0	61	13892	0	1776	16878	0	1824	18669	0	1902	19863	0	1954	22848	0	2186	27027	0	2215	30112	0	2275	34753	0	2389																	
	64	13953	0	1800	16983	0	1848	18763	0	1942	19963	0	2004	22953	0	2242	27164	0	2328	30003	0	2376	34623	0	2501																	
	68	14033	0	1824	17048	0	1872	18857	0	1973	20263	0	2040	23079	0	2280	27303	0	2400	28205	0	2400	28712	0	2400																	
	72	14103	0	1848	17153	0	1896	18951	0	2014	20364	0	2093	23194	0	2334	27355	0	2400	28261	0	2400	28773	0	2400																	
	75	14173	0	1872	17219	0	1920	19046	0	2054	20564	0	2143	23309	0	2390	27409	0	2400	28317	0	2400	28831	0	2400																	
7+7	61	9160	0	1110	11128	0	1140	12309	0	1189	13096	0	1221	15056	0	1367	17820	0	1385	19854	0	1422	22914	0	1483																	
	64	9206	0	1125	11184	0	1155	12271	0	1214	13162	0	1253	15141	0	1401	17910	0	1455	19782	0	1485	19532	0	1563																	
	68	9252	0	1140	11240	0	1170	12433	0	1233	13229	0	1275	15217	0	1425	18000	0	1500	18596	0	1500	19590	0	1500																	
	72	9299	0	1155	11297	0	1185	12495	0	1259	13295	0	1308	15293	0	1460	18036	0	1500	18634	0	1500	19630	0	1500																	
	75	9345	0	1170	11353	0	1200	12558	0	1284	13361	0	1340	15369	0	1494	18072	0	1500	18671	0	1500	19669	0	1500																	
7+9	61	10483	0	1299	12735	0	1330	14087	0	1387	14988	0	1425	17240	0	1594	20394	0	1615	22722	0	1659	26224	0	1741																	
	64	10536	0	1313	12800	0	1348	14158	0	1416	15064	0	1461	17328	0	1635	20497	0	1698	22639	0	1733	23253	0	1824																	
	68	10589	0	1330	12864	0	1365	14229	0	1439	15139	0	1488	17415	0	1663	20600	0	1750	21283	0	1750	22420	0	1750																	
	72	10642	0	1348	12928	0	1383	14300	0	1469	15215	0	1526	17502	0	1703	20641	0	1750	21325	0	1750	22465	0	1750																	
	75	10695	0	1365	12993	0	1400	14372	0	1498	15291	0	1563	17589	0	1743	20682	0	1750	21368	0	1750	22510	0	1750																	
7+12	61	12391	0	1443	15054	0	1482	16651	0	1545	17716	0	1587	20379	0	1776	24107	0	1800	26858	0	1849	30998	0	1940																	
	64	12454	0	1463	15130	0	1502	16735	0	1578	17806	0	1628	20482	0	1821	24228	0	1892	26761	0	1931	26422	0	2032																	
	68	12516	0	1482	15206	0	1521	16820	0	1603	17895	0	1658	20585	0	1853	24350	0	1950	25157	0	1950	26502	0	1950																	
	72	12579	0	1502	15282	0	1541	16904	0	1636	17985	0	1700	20688	0	1897	24399	0	1950	25207	0	1950	26555	0	1950																	
	75	12642	0	1521	15358	0	1560	16988	0	1669	18074	0	1741	20791	0	1942	24447	0	1950	25257	0	1950	26608	0	1950																	
7+18	61	15012	0	1776	18238	0	1824	20173	0	1902	21463	0	1954	24689	0	2186	29205	0	2215	32539	0	2275	37554	0	2389																	
	64	15088	0	1800	18330	0	1848	20275	0	1942	21572	0	2004	24814	0	2242	29353	0	2328	32421	0	2376	38010	0	2501																	
	68	15164	0	1824	18422	0	1872	20377	0	1973	21680	0	2040	24938	0	2280	29500	0	2400	30477	0	2400	32107	0	2400																	
	72	15239	0	1848	18514	0	1896	20479	0	2014	21789	0	2093	25063	0	2334	29559	0	2400	30538	0	2400	32171	0	2400																	
	75	15315	0	1872	18606	0	1920	20581	0	2054	21897	0	2143	25188	0	2390	29618	0	2400	30599	0	2400	32235	0	2400																	
7+24	61	18472	0	2072	22442	0	2128	24823	0	2219	26411	0	2279	30380	0	2551	35937	0	2584	40039	0	2654	46210	0	2786																	
	64	18566	0	2100	22555	0	2156	24948	0	2265	26544	0	2338	30533	0	2615	36119	0	2716	39894	0	2772	43989	0	2918																	
	68	18659	0	2128	22668	0	2184	25074	0	2302	26678	0	2380	30687	0	2660	36300	0	2800	37503	0	2800	39507	0	2800																	
	72	18752	0	2156	22782	0	2212	25199	0	2350	26811	0	2442	30840	0	2724	36373	0	2800	37578	0	2800	39566	0	2800																	
	75	18846	0	2184	22895	0	2240	25325	0	2396	26944	0	2500	30994	0	2789	36445	0	2800	37653	0	2800	39625	0	2800																	
9-9	61	11806	0	1443	14343	0	1482	15865	0	1545	16880	0	1587	19416	0	1776	22968	0	1800	25590	0	1849	29524	0	1940																	
	64																																									

CAPACITIES AND SELECTION DATA

18-18	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
18-24	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
22-24	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
24-24	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
7+7-7	61	13740	0	1628	16692	0	1672	16463	0	1743	19644	0	1791	22597	0	2004	26730	0	2031	29781	0	2086	34371	0	2189
	64	13809	0	1650	16776	0	1694	16557	0	1780	19744	0	1837	22711	0	2055	26665	0	2134	29673	0	2178	29298	0	2292
	68	13879	0	1672	16861	0	1716	16650	0	1808	19843	0	1870	22825	0	2090	27000	0	2200	27895	0	2200	29386	0	2200
	72	13948	0	1694	16945	0	1738	16743	0	1846	19942	0	1918	22939	0	2141	27054	0	2200	27950	0	2200	29444	0	2200
	75	14017	0	1716	17029	0	1760	16836	0	1883	20041	0	1965	23053	0	2191	27108	0	2200	28006	0	2200	29503	0	2200
7+7-9	61	15063	0	1776	18299	0	1824	20241	0	1902	21536	0	1954	24773	0	2186	29304	0	2215	32649	0	2275	37681	0	2388
	64	15139	0	1800	18392	0	1848	20344	0	1942	21645	0	2004	24988	0	2242	29452	0	2328	32530	0	2376	32119	0	2501
	68	15215	0	1824	18484	0	1872	20446	0	1973	21754	0	2040	25023	0	2280	29600	0	2400	30581	0	2400	32215	0	2400
	72	15291	0	1848	18577	0	1896	20548	0	2014	21862	0	2093	25148	0	2335	29659	0	2400	30642	0	2400	32280	0	2400
	75	15367	0	1872	18669	0	1920	20650	0	2054	21971	0	2143	25273	0	2390	29718	0	2400	30703	0	2400	32344	0	2400
7+7-12	61	16971	0	1924	20618	0	1976	22806	0	2060	24264	0	2116	27911	0	2369	33017	0	2400	36785	0	2465	42455	0	2587
	64	17057	0	1950	20722	0	2022	23921	0	2103	24387	0	2171	28052	0	2428	33183	0	2522	36652	0	2574	36188	0	2709
	68	17143	0	1976	20826	0	2028	23036	0	2137	24510	0	2210	28193	0	2470	33350	0	2600	34455	0	2600	36297	0	2600
	72	17228	0	2002	20930	0	2054	23151	0	2182	24632	0	2267	28334	0	2530	33417	0	2600	34524	0	2600	36369	0	2600
	75	17314	0	2028	21034	0	2080	23267	0	2225	24755	0	2322	28475	0	2590	33483	0	2600	34593	0	2600	36442	0	2600
7+7-18	61	19992	0	2516	23802	0	2584	26328	0	2694	28011	0	2768	32221	0	3097	38115	0	3138	42466	0	3223	49011	0	3383
	64	19991	0	2550	23922	0	2618	26461	0	2751	28153	0	2839	32384	0	3176	38308	0	3298	42312	0	3366	47776	0	3543
	68	19990	0	2584	24042	0	2652	26593	0	2795	28294	0	2890	32547	0	3230	38500	0	3400	39776	0	3400	41986	0	3400
	72	19989	0	2618	24163	0	2686	26728	0	2863	28436	0	2968	32706	0	3328	38677	0	3400	39864	0	3400	41986	0	3400
	75	19988	0	2652	24283	0	2720	26859	0	2910	28577	0	3038	32872	0	3386	38854	0	3400	39938	0	3400	42069	0	3400
7+7-24	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
7+9-9	61	16396	0	1924	19907	0	1976	22019	0	2060	23428	0	2116	26949	0	2369	31878	0	2400	35517	0	2465	40991	0	2587
	64	16469	0	1950	20007	0	2022	22131	0	2103	23546	0	2171	27085	0	2428	32039	0	2522	35388	0	2574	34940	0	2709
	68	16551	0	1976	20108	0	2028	22242	0	2137	23664	0	2210	27221	0	2470	32200	0	2600	33267	0	2600	35045	0	2600
	72	16634	0	2002	20208	0	2054	22353	0	2182	23783	0	2267	27357	0	2530	32264	0	2600	33333	0	2600	35115	0	2600
	75	16717	0	2028	20309	0	2080	22464	0	2225	23901	0	2322	27493	0	2590	32329	0	2600	33400	0	2600	35185	0	2600
7+9-12	61	18294	0	2072	22225	0	2128	24584	0	2219	26156	0	2279	30087	0	2551	35591	0	2584	39653	0	2654	45764	0	2786
	64	18387	0	2100	22337	0	2156	24708	0	2265	26288	0	2338	30239	0	2615	35770	0	2716	39509	0	2772	39009	0	2918
	68	18479	0	2128	22450	0	2184	24832	0	2302	26420	0	2380	30391	0	2660	35950	0	2800	37141	0	2800	39127	0	2800
	72	18571	0	2156	22562	0	2212	24956	0	2350	26552	0	2442	30543	0	2724	36022	0	2800	37215	0	2800	39205	0	2800
	75	18664	0	2184	22674	0	2240	25080	0	2396	26685	0	2500	30695	0	2789	36094	0	2800	37290	0	2800	39283	0	2800
7+9-18	61	20355	0	2590	24729	0	2660	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0</																						

9+9-12	61	19617	0	2516	23833	0	2584	26362	0	2694	28048	0	2768	32263	0	3097	38165	0	3138	42521	0	3223	49074	0	3383
	64	19716	0	2550	23953	0	2618	26495	0	2751	28190	0	2839	32426	0	3176	38357	0	3298	42366	0	3366	41830	0	3543
	68	19815	0	2584	24073	0	2652	26628	0	2795	28331	0	2890	32589	0	3230	38550	0	3400	39827	0	3400	41956	0	3400
	72	19915	0	2618	24194	0	2686	26761	0	2833	28473	0	2965	32752	0	3308	38627	0	3400	39907	0	3400	42040	0	3400
	75	20014	0	2652	24314	0	2720	26894	0	2910	28614	0	3036	32915	0	3386	38704	0	3400	39987	0	3400	42124	0	3400
9+9-18	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
9+9-24	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
9+12-12	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
9+12-18	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
9+12-24	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
9+18-18	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
12+12+12	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
12+12-18	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
12+12-24	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
12+18-18	61	20355	0	2590	24729	0	2680	27353	0	2773	29103	0	2849	33477	0	3189	39600	0	3231	44120	0	3318	50920	0	3483
	64	20458	0	2625	24854	0	2695	27491	0	2832	29250	0	2923	33646	0	3269	39800	0	3395	43960	0	3465	43404	0	3647
	68	20561	0	2660	24979	0	2730	27630	0	2877	29397	0	2975	33815	0	3325	40000	0	3500	41325	0	3500	43534	0	3500
	72	20664	0	2695	25104	0	2765	27768	0	2937	29544	0	3052	33984	0	3406	40080	0	3500	41408	0	3500	43621	0	3500
	75	20766	0	2730	25229	0	2800	27906	0	2995	29691	0	3126	34153	0	3486	40160	0	3500	41491	0	3500	43709	0	3500
7+7+7-7	61	18320	0	2072	22256	0	2128	24618	0	2219	26193	0	2279	30129	0	2551	36640	0	2584	39708	0	2654	45828	0	2786
	64	18412	0	2100	22389	0	2156	24742	0	2265	26325	0	2338	30281	0	2615	36820	0	2716	39964	0	2772	39063	0	2918
	68	18505	0	2128																					

3.3. CORRECTION FACTORS ACCORDING TO PIPING LENGTH

Correction Factor for **Cooling Capacity** according to Piping Length

The cooling capacity should be corrected according to the following formula:

$$CCA = CC \times F$$

- CCA: Actual Corrected Cooling Capacity (kcal/h)
- CC: Cooling Capacity in the Performance Table (kcal/h)
- F: Correction Factor Based on the Equivalent Piping Length

Correction Factor for **Heating Capacity** according to Piping Length

The heating capacity should be corrected according to the following formula:

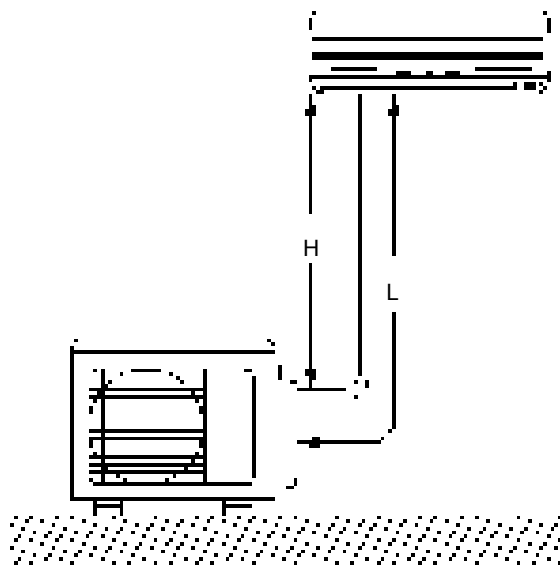
$$HCA = HC \times F$$

- HCA: Actual Corrected Heating Capacity (kcal/h)
- HC: Heating Capacity in the Performance Table (kcal/h)
- F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the following figure.

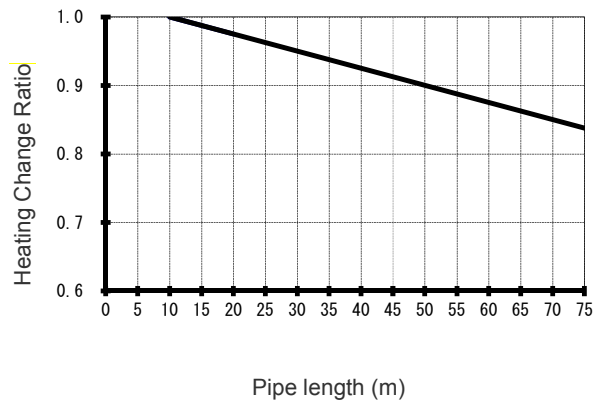
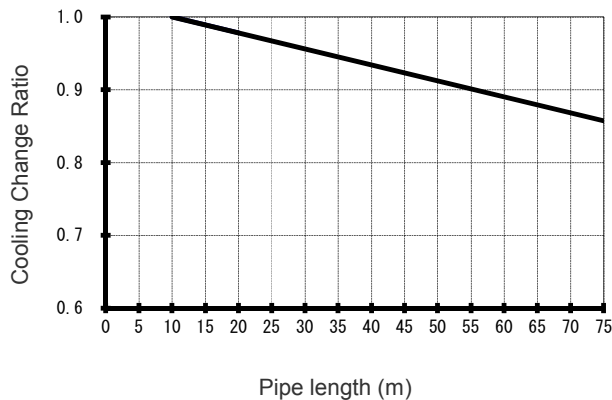
Equivalent Piping Length for:

- One 90° Elbow is 0.5m.
- One 180° Curve is 1.5m.



- H: Vertical Distance Between Indoor Unit and Outdoor Units in Meters
- L: Actual One-Way Piping Length Between Indoor Unit and Outdoor Unit in Meters
- EL: Equivalent Total Distance Between Indoor Unit and Outdoor Unit in Meters (Equivalent One-Way Piping Length)

Model Multi Outdoor 42000 BTU/h
RAM-G42N5HAA



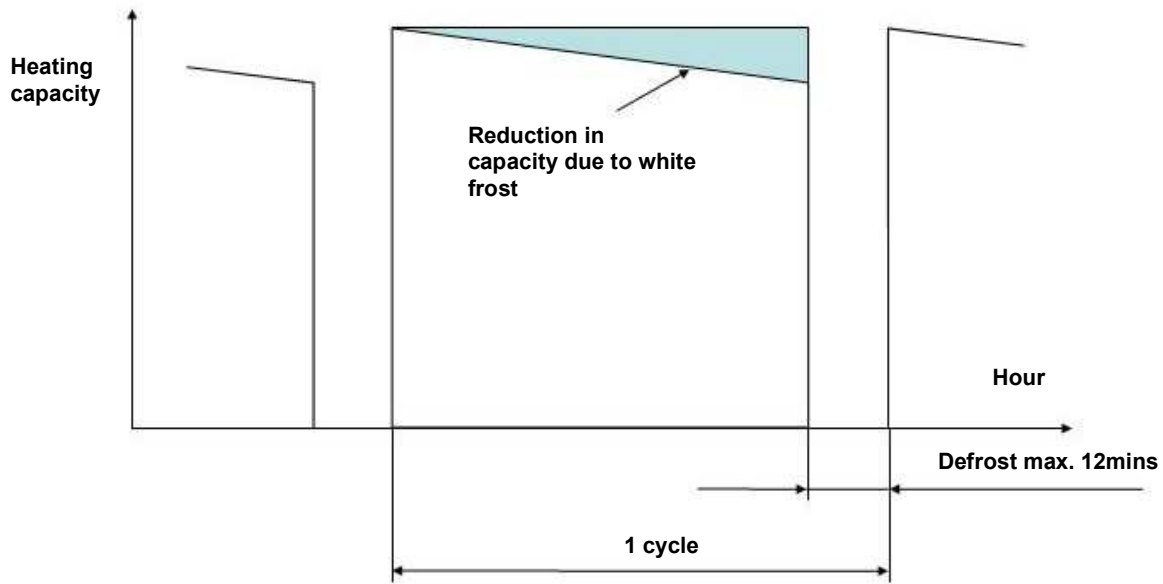
3.4. CORRECTION FACTORS ACCORDING TO DEFROSTING OPERATION

The heating capacity in the preceding paragraph, excludes the condition of the frost or the defrosting operation period. In consideration of the frost or the defrosting operation, the heating capacity is corrected by the equation below.

Corrected heating capacity = Defrost Correction factor x unit capacity

OUTDOOR TEMPERATURE (°CDB)	-15	-10	-7	-5	0	7	10	15
Correction factor (humidity rate85% RH)	0.95	0.95	0.89	0.85	0.81	1.0	1.0	1.0

Correction Factor



NOTE:

The correction factor is not valid for special conditions such as snowfall or operation in a transitional period.

**3.5.1 DUAL SYSTEM MULTI R.A.C. RAM-G18N2HAA
INDOOR UNITS COMBINATIONS TO BE ABLE TO INSTALL**

NOMINAL COOLING CAPACITY(Btu)	indoor unit model	CAPACITY(Btu.) at one unit operation		SUITABLE ROOM SIZE(m ²) at one unit operation	
		cooling	heating	cooling	heating
7K Btu	RAK-DJ07QHAA	3050-9000	3050-10900	8-12	9-11
	RAI-GJ07QHAA	3050-8500	3050-10900	8-12	9-11
		3050-8500	3050-10900	8-12	9-11
9K Btu	RAK-DJ09QHAA	3050-10600	3050-15000	11-17	14-18
	RAK-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAD-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAI-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAF-FJ09QHAA	3050-10200	3050-18000	11-17	14-18
12K Btu	RAK-DJ12QHAA	3050-13650	3050-18000	16-24	17-22
	RAK-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAD-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAI-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAF-FJ12QHAA	3050-13650	3050-22500	16-24	17-22

*Make sure to connect minimum two indoor units.

POSSIBLE COMBINATIONS TO OPERATE		SUITABLE ROOM SIZE TO INSTALL (m ²)	CONNECTING POSITION ON OUTDOOR UNIT (VALVE DIAMETER)(mm)		
			NO.1	NO.2	
			6.35/9.52D	6.35/9.52D	
TWO UNIT	14K	7K+7K	(8-12)+(8-12)	7K	7K
	16K	7K+9K	(8-12)+(11-17)	7K	9K
	19K	7K+12K	(8-12)+(16-24)	7K	12K
	18K	9K+9K	(11-17)+(11-17)	9K	9K
	21K	9K+12K	(11-17)+(16-24)	9K	12K
	24K	12K+12K	(16-24)+(16-24)	12K	12K

- Climate is in the temperate zone like Tokyo, Japan.
- For usual residential use.
- Smaller figure is for light construction which means light thermally sealed.
- Larger figure is for heavy constructions, which means well thermally sealed.

3.6. COMBINATION TABLE FOR MULTIZONE OUTDOOR (RAM-G24N3HAA)

POSSIBLE COMBINATIONS TO OPERATE (Kbtu)		COOLING						HEATING								
		CAPACITY RATING(BTU) (RANGE)		OUTDOOR UNIT			EER	CAPACITY RATING(BTU) (RANGE)		OUTDOOR UNIT			EER			
				CONSUMPTION (W)	Ampere(A)at 208 - 230					TOTAL	CONSUMPTION (W)	AMPERE(A)at 208 - 230				
		TOTAL														
ONE UNIT	7	7	7000 (3050-8500)	7000	450 (460-500)	2.17	~	1.97	15.6	9000 (3050-10900)	9000	720 (320-1130)	3.47	~	3.13	12.5
	9	9	9000 (3050-10200)	9000	650 (460-720)	3.14	~	2.84	13.8	11600 (3050-15000)	11600	980 (320-1480)	4.72	~	4.27	11.8
	12	12	12000 (3050-13650)	12000	1030 (460-1130)	4.98	~	4.50	11.7	15350 (3050-18000)	15350	1150 (320-1950)	5.53	~	5.01	13.3
	18	18	18000 (3050-17750)	18000	1600 (460-2200)	7.73	~	6.99	11.3	20500 (3050-23200)	20500	1950 (460-2100)	9.38	~	8.49	10.5
TWO UNIT	14	7 + 7	7000 + 7000 (7000-17000)	14000	1250 (660-1800)	6.04	~	5.46	11.2	9000 + 9000 (9000-21800)	18000	1500 (390-1800)	7.22	~	6.53	12.0
	16	7 + 9	7000 + 9000 (7000-19000)	16000	1450 (660-2200)	7.01	~	6.34	11.0	9013 + 11588 (9000-25900)	20600	1750 (390-2000)	8.42	~	7.62	11.8
	19	7 + 12	7000 + 12000 (7000-21500)	19000	1600 (660-2200)	7.73	~	6.99	11.9	8842 + 15158 (9000-28900)	24000	1950 (460-2100)	9.38	~	8.49	11.4
	25	7 + 18	6720 + 17280 (7000-26250)	24000	1920 (660-2820)	9.28	~	8.39	12.5	6720 + 17280 (9000-31500)	24000	2478 (460-2900)	11.93	~	10.78	10.0
	18	9 + 9	9000 + 9000 (7000-20400)	18000	1600 (660-2200)	7.73	~	6.99	11.3	11600 + 11600 (9000-30000)	23200	1950 (460-2100)	9.38	~	8.49	11.9
	21	9 + 12	9000 + 12000 (7000-24000)	21000	1700 (660-2400)	8.21	~	7.43	12.4	10286 + 13714 (9000-31500)	24000	2050 (460-2500)	9.87	~	8.92	11.4
	27	9 + 18	8000 + 16000 (7000-27950)	24000	1920 (660-2820)	9.28	~	8.39	12.5	8000 + 16000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	10.9
	24	12 + 12	12000 + 12000 (7000-27300)	24000	1920 (660-2820)	9.28	~	8.39	12.5	12000 + 12000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	10.4
	30	12 + 18	9600 + 14400 (7000-28000)	24000	1920 (660-2820)	9.28	~	8.39	12.5	9600 + 14400 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
	36	18 + 18	12000 + 12000 (7000-28000)	24000	1920 (660-2820)	9.28	~	8.39	12.5	12000 + 12000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
THREE UNIT	21	7 + 7 + 7	7000 + 7000 + 7000 (7000-25500)	21000	1700 (660-2400)	8.21	~	7.43	12.4	8000 + 8000 + 8000 (9000-31500)	24000	2050 (460-2500)	9.87	~	8.92	11.7
	23	7 + 7 + 9	7000 + 7000 + 9000 (7000-27200)	23000	1880 (660-2600)	9.08	~	8.21	12.2	7304 + 7304 + 9391 (9000-31500)	24000	2290 (460-2590)	11.02	~	9.97	11.7
	26	7 + 7 + 12	6462 + 6462 + 11077 (7000-28000)	24000	2100 (660-2820)	10.15	~	9.18	11.4	6462 + 6462 + 11077 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.7
	32	7 + 7 + 18	5250 + 5250 + 13500 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	5250 + 5250 + 13500 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.7
	25	7 + 9 + 9	6720 + 8640 + 8640 (7000-28000)	24000	1920 (660-2820)	9.28	~	8.39	12.5	6720 + 8640 + 8640 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	11.9
	28	7 + 9 + 12	6000 + 7714 + 10286 (7000-28000)	24000	2100 (660-2820)	10.15	~	9.18	11.4	6000 + 7714 + 10286 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	10.9
	34	7 + 9 + 18	4941 + 6353 + 12706 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	4941 + 6353 + 12706 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
	31	7 + 12 + 12	5419 + 9290 + 9290 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	5419 + 9290 + 9290 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
	27	9 + 9 + 9	8000 + 8000 + 8000 (7000-28000)	24000	1920 (660-2820)	9.28	~	8.39	12.5	8000 + 8000 + 8000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	10.9
	30	9 + 9 + 12	7200 + 7200 + 9600 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	7200 + 7200 + 9600 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
	36	9 + 9 + 18	6000 + 6000 + 12000 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	6000 + 6000 + 12000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6
	33	9 + 12 + 12	6545 + 8727 + 8727 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	6545 + 8727 + 8727 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	11.3
36	12 + 12 + 12	8000 + 8000 + 8000 (7000-28000)	24000	2300 (660-2820)	11.11	~	10.05	10.4	8000 + 8000 + 8000 (9000-31500)	24000	2478 (460-2590)	11.93	~	10.78	9.6	

**3.6.1 TRIPLE SYSTEM MULTI R.A.C. RAM-G24N3HAA
INDOOR UNITS COMBINATIONS TO BE ABLE TO INSTALL**

NOMINAL COOLING CAPACITY(kW)	indoor unit model	CAPACITY(Btu.) at one unit operation		SUITABLE ROOM SIZE(m ²) at one unit operation	
		cooling	heating	cooling	heating
7K Btu	RAK-DJ07QHAA	3050-9000	3050-10900	8-12	9-11
	RAI-GJ07QHAA	3050-8500	3050-10900	8-12	9-11
		3050-8500	3050-10900	8-12	9-11
9K Btu	RAK-DJ09QHAA	3050-10600	3050-15000	11-17	14-18
	RAK-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAD-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAI-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAF-FJ09QHAA	3050-10200	3050-18000	11-17	14-18
12K Btu	RAK-DJ12QHAA	3050-13650	3050-18000	16-24	17-22
	RAK-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAD-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAI-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAF-FJ12QHAA	3050-13650	3050-22500	16-24	17-22
18K Btu	RAK-DJ18QHAA	3050-17750	3050-27600	23-24	23-29
	RAK-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAD-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAI-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAF-FJ18QHAA	4100-19800	4100-23200	23-24	23-29

POSSIBLE COMBINATIONS TO OPERATE			SUITABLE ROOM SIZE TO INSTALL (m2)	CONNECTING POSITION ON OUTDOOR UNIT (VALVE DIAMETER) Inch (mm)			
				NO.1	NO.2	NO.3	NO.4
				1/4"(6.35)/ 3/8"(9.52)D	1/4"(6.35)/ 3/8"(9.52)D	1/4"(6.35)/ 3/8"(9.52)D	1/4"(6.35)/ 1/2"(12.7)D
TWO UNIT	14K	7K+7K	(8-12)+(8-12)	7K	7K		
	16K	7K+9K	(8-12)+(11-17)	7K	9K		
	19K	7K+12K	(8-12)+(16-24)	7K	12K		
	25K	7K+18K	(8-12)+(20-24)	7K			18K
	29K	7K + 22K	(8-12)+(20-24)	7K			22K
	18K	9K+9K	(11-17)+(11-17)	9K	9K		
	21K	9K+12K	(11-17)+(16-24)	9K	12K		
	27K	9K+18K	(11-17)+(20-24)	9K			18K
	31K	9K + 22K	(11-17)+(23-24)	9K			22K
	24K	12K+12K	(16-24)+(16-24)	12K	12K		
	30K	12K+18K	(16-24)+(20-24)	12K			18K
	34K	12K+22K	(16-24)+(23-24)	12K			22K
	36K	18K+18K	(20-24)+(20-24)			○18K	18K
THREE UNIT	21K	7K+7K+7K	(8-12)+(8-12)+(8-12)	7K	7K	7K	
	23K	7K+7K+9K	(8-12)+(8-12)+(11-17)	7K	7K	9K	
	26K	7K+7K+12K	(8-12)+(8-12)+(16-24)	7K	7K	12K	
	32K	7K+7K+18K	(8-12)+(8-12)+(20-24)	7K	7K		18K
	36K	7K+7K+22K	(8-12)+(8-12)+(23-24)	7K	7K		22K
	25K	7K+9K+9K	(8-12)+(11-17)+(11-17)	7K	9K	9K	
	28K	7K+9K+12K	(8-12)+(11-17)+(16-24)	7K	9K	12K	
	34K	7K+9K+18K	(8-12)+(11-17)+(20-24)	7K	9K		18K
	31K	7K+12K+12K	(8-12)+(16-24)+(16-24)	7K	12K	12K	
	27K	9K+9K+9K	(11-17)+(11-17)+(11-17)	9K	9K	9K	
	30K	9K+9K+12K	(11-17)+(11-17)+(16-24)	9K	9K	12K	
	36K	9K+9K+18K	(11-17)+(11-17)+(20-24)	9K	9K		18K
	33K	9K+12K+12K	(11-17)+(16-24)+(16-24)	9K	12K	12K	
36K	12K+12K+12K	(16-24)+(16-24)+(16-24)	12K	12K	12K		

Legend:

Piping Size	Adaptor size
Inch (mm)	
1/4"(6.35)	○
3/8"(9.52)	◉
1/2"(12.7)	●
5/8"(15.88)	

- Climate is in the temperate zone like Tokyo, Japan.
- For usual residential use.
- Smaller figure is for light construction which means light thermally sealed.
- Larger figure is for heavy constructions, which means well thermally sealed.

3.7. COMBINATION TABLE FOR MULTIZONE OUTDOOR (RAM-G36N4HAA)

POSSIBLE COMBINATIONS TO OPERATE (Kbtu)			COOLING						HEATING							
			CAPACITY RATING(BTU) (RANGE)		OUTDOOR UNIT			EER	CAPACITY RATING(BTU) (RANGE)		OUTDOOR UNIT			EER		
					TOTAL	CONSUMPTION (W)	AMPERE(A)at 208 - 230				TOTAL	CONSUMPTION (W)	AMPERE(A)at 208 - 230			
							208						230		208	230
ONE UNIT	7	7	7000 (3050-8500)	7000	760	3.66	~	3.31	9.2	9000 (3050-10900)	9000	720	3.47	~	3.13	12.5
	9	9	9000 (3050-10200)	9000	820	3.95	~	3.57	11.0	11600 (3050-15000)	11600	980	4.72	~	4.27	11.8
	12	12	12000 (3050-13650)	12000	1030	4.96	~	4.48	11.7	15350 (3050-18000)	15350	1150	5.53	~	5.01	13.3
	18	18	18000 (3050-17750)	18000	1600	7.70	~	6.96	11.3	20500 (3050-23200)	20500	1950	9.38	~	8.49	10.5
	22	22	22000 (3050-24000)	22000	1900	9.14	~	8.27	11.4	25000 (3050-28000)	25000	2240	10.78	~	9.75	11.1
	24	24	24000 (4100-25600)	24000	2100	10.11	~	9.14	11.4	27300 (3050-30690)	27300	2400	11.55	~	10.45	11.4
	14	7 + 7	7000 + 7000 (7000-17000)	14000	1250	6.02	~	5.44	11.2	9000 + 9000 (9000-21800)	18000	1500	7.22	~	6.53	12.0
16	7 + 9	7000 + 9000 (7000-19000)	16000	1450	6.98	~	6.31	11.0	9013 + 11588 (9000-25900)	20600	1750	8.42	~	7.62	11.8	
19	7 + 12	7000 + 12000 (7000-21500)	19000	1600	7.70	~	6.96	11.9	8971 + 15379 (9000-28900)	24350	1950	9.38	~	8.49	12.5	
25	7 + 18	7000 + 18000 (7000-26250)	25000	1920	9.24	~	8.36	13.0	8260 + 21240 (9000-34100)	29500	2400	11.55	~	10.45	12.3	
29	7 + 22	7000 + 22000 (7000-34000)	29000	2300	11.07	~	10.01	12.5	8207 + 25793 (9000-41600)	34000	2660	12.80	~	11.58	12.7	
31	7 + 24	7000 + 24000 (7000-34000)	31000	2520	12.13	~	10.97	12.3	8129 + 27871 (9000-41600)	36000	2800	13.48	~	12.19	12.9	
18	9 + 9	9000 + 9000 (7000-20400)	18000	1550	7.46	~	6.75	11.6	11600 + 11600 (9000-30000)	23200	1950	9.38	~	8.49	11.9	
21	9 + 12	9000 + 12000 (7000-24000)	21000	1700	8.18	~	7.40	12.4	11550 + 15400 (9000-33000)	26950	2200	10.59	~	9.57	12.3	
27	9 + 18	9000 + 18000 (7000-27950)	27000	2420	11.65	~	10.53	11.3	10700 + 21400 (9000-38200)	32100	2600	12.51	~	11.32	12.3	
31	9 + 22	9000 + 22000 (7000-36000)	31000	2540	12.22	~	11.05	12.2	10452 + 25548 (9000-42000)	36000	3200	15.40	~	13.93	11.3	
33	9 + 24	9000 + 24000 (7000-36000)	33000	2620	12.61	~	11.40	12.6	9818 + 26182 (9000-42000)	36000	3200	15.40	~	13.93	11.3	
24	12 + 12	12000 + 12000 (7000-27300)	24000	1900	9.14	~	8.27	12.6	15350 + 15350 (9000-36000)	30700	2900	13.96	~	12.62	10.6	
30	12 + 18	12000 + 18000 (7000-32650)	30000	2500	12.03	~	10.88	12.0	14340 + 21510 (9000-41200)	35850	31000	149.19	~	134.92	11.6	
34	12 + 22	12000 + 22000 (7000-39250)	34000	2750	13.23	~	11.97	12.3	12706 + 23294 (9000-42000)	36000	3200	15.40	~	13.93	11.3	
36	12 + 24	12000 + 24000 (7000-39250)	36000	2880	13.86	~	12.53	12.5	12000 + 24000 (9000-42000)	36000	3200	15.40	~	13.93	11.3	
36	18 + 18	18000 + 18000 (7000-38000)	36000	2880	13.86	~	12.53	12.5	18000 + 18000 (9000-42000)	36000	3200	15.40	~	13.93	11.3	
40	18 + 22	16200 + 19800 (7000-40000)	36000	2880	13.86	~	12.53	12.5	16200 + 19800 (9000-42000)	36000	3300	15.88	~	14.36	10.9	
42	18 + 24	15429 + 20571 (7000-40000)	36000	2880	13.86	~	12.53	12.5	15429 + 20571 (9000-42000)	36000	3400	16.36	~	14.80	10.6	
44	22 + 22	18000 + 18000 (7000-40000)	36000	2880	13.86	~	12.53	12.5	18000 + 18000 (9000-42000)	36000	3500	16.84	~	15.23	10.3	
46	22 + 24	17217 + 18783 (7000-40000)	36000	2880	13.86	~	12.53	12.5	17217 + 18783 (9000-42000)	36000	3500	16.84	~	15.23	10.3	
48	24 + 24	18000 + 18000 (7000-40000)	36000	2880	13.86	~	12.53	12.5	18000 + 18000 (9000-42000)	36000	3700	17.81	~	16.10	9.7	

THREE UNIT	21	7 + 7 + 7	7000 + 7000 + 7000 (7000-25500)	21000	1700 (760-2600)	8.18	~	7.40	12.4	9000 + 9000 + 9000 (9000-32700)	27000	2200 (550-3000)	10.59	~	9.57	12.3
	23	7 + 7 + 9	7000 + 7000 + 9000 (7000-27200)	23000	1880 (760-3200)	9.05	~	8.18	12.2	9009 + 9009 + 11583 (9000-36800)	29600	2400 (550-3200)	11.55	~	10.45	12.3
	26	7 + 7 + 12	7000 + 7000 + 12000 (7000-30650)	26000	2400 (760-2900)	11.55	~	10.45	10.8	8979 + 8979 + 15392 (9000-39800)	33350	2600 (550-3400)	12.51	~	11.32	12.8
	32	7 + 7 + 18	7000 + 7000 + 18000 (7000-36000)	32000	2600 (760-3200)	12.51	~	11.32	12.3	8422 + 8422 + 21656 (9000-42000)	38500	3200 (550-3600)	15.40	~	13.93	12.0
	36	7 + 7 + 22	7000 + 7000 + 22000 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	7000 + 7000 + 22000 (9000-42000)	36000	3200 (550-3850)	15.40	~	13.93	11.3
	38	7 + 7 + 24	6632 + 6632 + 22737 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	6632 + 6632 + 22737 (9000-42000)	36000	3300 (550-3850)	15.88	~	14.36	10.9
	25	7 + 9 + 9	7000 + 9000 + 9000 (7000-28900)	25000	1920 (760-3200)	9.24	~	8.36	13.0	9016 + 11592 + 11592 (9000-40900)	32200	2600 (550-3400)	12.51	~	11.32	12.4
	28	7 + 9 + 12	7000 + 9000 + 12000 (7000-32350)	28000	2400 (760-2900)	11.55	~	10.45	11.7	8988 + 11555 + 15407 (9000-42000)	35950	2800 (550-3600)	13.48	~	12.19	12.8
	34	7 + 9 + 18	7000 + 9000 + 18000 (7000-37700)	34000	2600 (760-3200)	12.51	~	11.32	13.1	7412 + 9529 + 19059 (9000-42000)	36000	3200 (550-3850)	15.40	~	13.93	11.3
	38	7 + 9 + 22	6632 + 8526 + 20842 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	6632 + 8526 + 20842 (9000-42000)	36000	3300 (550-3850)	15.88	~	14.36	10.9
	40	7 + 9 + 24	6300 + 8100 + 21600 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	6300 + 8100 + 21600 (9000-42000)	36000	3300 (550-3850)	15.88	~	14.36	10.9
	31	7 + 12 + 12	7000 + 12000 + 12000 (7000-35800)	31000	2500 (760-3000)	12.03	~	10.88	12.4	8129 + 13935 + 13935 (9000-42000)	36000	3200 (550-3850)	15.40	~	13.93	11.3
	37	7 + 12 + 18	6811 + 11676 + 17514 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	6811 + 11676 + 17514 (9000-42000)	36000	3300 (550-3850)	15.88	~	14.36	10.9
	41	7 + 12 + 22	6146 + 10537 + 19317 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	6146 + 10537 + 19317 (9000-42000)	36000	3400 (550-3850)	16.36	~	14.80	10.6
	43	7 + 12 + 24	5860 + 10047 + 20093 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	5860 + 10047 + 20093 (9000-42000)	36000	3500 (550-3850)	16.84	~	15.23	10.3
	43	7 + 18 + 18	5860 + 15070 + 15070 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	5860 + 15070 + 15070 (9000-42000)	36000	3500 (550-3850)	16.84	~	15.23	10.3
	47	7 + 18 + 22	5362 + 13787 + 16851 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	5362 + 13787 + 16851 (9000-42000)	36000	3600 (550-3850)	17.33	~	15.67	10.0
	27	9 + 9 + 9	9000 + 9000 + 9000 (7000-30600)	27000	2400 (760-2900)	11.55	~	10.45	11.3	11600 + 11600 + 11600 (9000-42000)	34800	3200 (550-3600)	15.40	~	13.93	10.9
	30	9 + 9 + 12	9000 + 9000 + 12000 (7000-34050)	30000	2500 (760-3000)	12.03	~	10.88	12.0	10800 + 10800 + 14400 (9000-42000)	36000	3300 (550-3600)	15.88	~	14.36	10.9
	36	9 + 9 + 18	9000 + 9000 + 18000 (7000-39400)	36000	2880 (760-3200)	13.86	~	12.53	12.5	9000 + 9000 + 18000 (9000-42000)	36000	3500 (550-3850)	16.84	~	15.23	10.3
	40	9 + 9 + 22	8100 + 8100 + 19800 (7000-39400)	36000	2880 (760-3200)	13.86	~	12.53	12.5	8100 + 8100 + 19800 (9000-42000)	36000	3600 (550-3850)	17.33	~	15.67	10.0
	42	9 + 9 + 24	7714 + 7714 + 20571 (7000-39400)	36000	2880 (760-3200)	13.86	~	12.53	12.5	7714 + 7714 + 20571 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	33	9 + 12 + 12	9000 + 12000 + 12000 (7000-37500)	33000	2600 (760-3100)	12.51	~	11.32	12.7	9818 + 13091 + 13091 (9000-42000)	36000	3500 (550-3850)	16.84	~	15.23	11.3
	39	9 + 12 + 18	8308 + 11077 + 16615 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	8308 + 11077 + 16615 (9000-42000)	36000	3500 (550-3850)	16.84	~	15.23	10.0
	43	9 + 12 + 22	7535 + 10047 + 18419 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	7535 + 10047 + 18419 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	45	9 + 12 + 24	7200 + 9600 + 19200 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	7200 + 9600 + 19200 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	45	9 + 18 + 18	7200 + 14400 + 14400 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	7200 + 14400 + 14400 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	11.4
	36	12 + 12 + 12	12000 + 12000 + 12000 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	12000 + 12000 + 12000 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	10.3
	42	12 + 12 + 18	10286 + 10286 + 15429 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	10286 + 10286 + 15429 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	46	12 + 12 + 22	9391 + 9391 + 17217 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	9391 + 9391 + 17217 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	48	12 + 12 + 24	9000 + 9000 + 18000 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	9000 + 9000 + 18000 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7
	48	12 + 18 + 18	9000 + 13500 + 13500 (7000-40000)	36000	2880 (760-3200)	13.86	~	12.53	12.5	9000 + 13500 + 13500 (9000-42000)	36000	3700 (550-3850)	17.81	~	16.10	9.7

FOUR UNIT	28	7 + 7 + 7 + 7	7000 + 7000 + 7000 + 7000 (7000-34000)	28000	2400	11.55	~	10.45	11.7	9000 + 9000 + 9000 + 9000 (9000-42000)	36000	3200	15.40	~	13.93	11.3
	30	7 + 7 + 7 + 9	7000 + 7000 + 7000 + 9000 (7000-35700)	30000	2500	12.03	~	10.88	12.0	8400 + 8400 + 8400 + 10800 (9000-42000)	36000	3400	16.36	~	14.80	10.6
	33	7 + 7 + 7 + 12	7000 + 7000 + 7000 + 12000 (7000-39150)	33000	2600	12.51	~	11.32	12.7	7636 + 7636 + 7636 + 13091 (9000-42000)	36000	3500	16.84	~	15.23	10.3
	39	7 + 7 + 7 + 18	6462 + 6462 + 6462 + 16615 (7000-40000)	36000	2880	13.86	~	12.53	12.5	6462 + 6462 + 6462 + 16615 (9000-42000)	36000	3500	16.84	~	15.23	10.3
	43	7 + 7 + 7 + 22	5860 + 5860 + 5860 + 18419 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5860 + 5860 + 5860 + 18419 (9000-42000)	36000	3500	16.84	~	15.23	10.3
	45	7 + 7 + 7 + 24	5600 + 5600 + 5600 + 19200 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5600 + 5600 + 5600 + 19200 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	32	7 + 7 + 9 + 9	7000 + 7000 + 9000 + 9000 (7000-37400)	32000	2880	13.86	~	12.53	12.3	7875 + 7875 + 10125 + 10125 (9000-42000)	36000	3300	15.88	~	14.36	10.9
	35	7 + 7 + 9 + 12	7000 + 7000 + 9000 + 12000 (7000-40000)	35000	2880	13.86	~	12.53	12.5	7200 + 7200 + 9257 + 12343 (9000-42000)	36000	3500	16.84	~	15.23	10.3
	41	7 + 7 + 9 + 18	6146 + 6146 + 7902 + 15805 (7000-40000)	36000	2880	13.86	~	12.53	12.5	6146 + 6146 + 7902 + 15805 (9000-42000)	36000	3600	17.33	~	15.67	10.0
	45	7 + 7 + 9 + 22	5600 + 5600 + 7200 + 17600 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5600 + 5600 + 7200 + 17600 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	47	7 + 7 + 9 + 24	5362 + 5362 + 6894 + 18383 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5362 + 5362 + 6894 + 18383 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	38	7 + 7 + 12 + 12	6632 + 6632 + 11368 + 11368 (7000-40000)	36000	2880	13.86	~	12.53	12.5	6632 + 6632 + 11368 + 11368 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	44	7 + 7 + 12 + 18	5727 + 5727 + 9818 + 14727 (7000-46000)	36000	2880	13.86	~	12.53	12.0	5727 + 5727 + 9818 + 14727 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	48	7 + 7 + 12 + 22	5250 + 5250 + 9000 + 16500 (7000-46000)	36000	2880	13.86	~	12.53	12.0	5250 + 5250 + 9000 + 16500 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	34	7 + 9 + 9 + 9	7000 + 9000 + 9000 + 9000 (7000-35700)	34000	2600	12.51	~	11.32	13.1	7412 + 9529 + 9529 + 9529 (9000-42000)	36000	3300	15.88	~	14.36	10.9
	37	7 + 9 + 9 + 12	6811 + 8757 + 8757 + 11676 (7000-40000)	36000	2880	13.86	~	12.53	12.5	6811 + 8757 + 8757 + 11676 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	43	7 + 9 + 9 + 18	5860 + 7535 + 7535 + 15070 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5860 + 7535 + 7535 + 15070 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	47	7 + 9 + 9 + 22	5362 + 6894 + 6894 + 16851 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5362 + 6894 + 6894 + 16851 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	40	7 + 9 + 12 + 12	6300 + 8100 + 10800 + 10800 (7000-40000)	36000	2880	13.86	~	12.53	12.0	6300 + 8100 + 10800 + 10800 (9000-42000)	36000	3700	17.81	~	16.10	11.4
	46	7 + 9 + 12 + 18	5478 + 7043 + 9391 + 14087 (7000-40000)	36000	2880	13.86	~	12.53	12.0	5478 + 7043 + 9391 + 14087 (9000-42000)	36000	3600	17.33	~	15.67	11.4
	43	7 + 12 + 12 + 12	5860 + 10047 + 10047 + 10047 (7000-40000)	36000	2880	13.86	~	12.53	12.5	5860 + 10047 + 10047 + 10047 (9000-42000)	36000	3600	17.33	~	15.67	9.7
	36	9 + 9 + 9 + 9	9000 + 9000 + 9000 + 9000 (7000-40000)	36000	2880	13.86	~	12.53	12.5	9000 + 9000 + 9000 + 9000 (9000-42000)	36000	3200	15.40	~	13.93	11.3
	39	9 + 9 + 9 + 12	8308 + 8308 + 8308 + 11077 (7000-40000)	36000	2880	13.86	~	12.53	12.5	8308 + 8308 + 8308 + 11077 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	45	9 + 9 + 9 + 18	7200 + 7200 + 7200 + 14400 (7000-40000)	36000	2880	13.86	~	12.53	12.5	7200 + 7200 + 7200 + 14400 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	42	9 + 9 + 12 + 12	7714 + 7714 + 10286 + 10286 (7000-46000)	36000	2880	13.86	~	12.53	12.5	7714 + 7714 + 10286 + 10286 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	48	9 + 9 + 12 + 18	6750 + 6750 + 9000 + 13500 (7000-40000)	36000	2880	13.86	~	12.53	12.5	6750 + 6750 + 9000 + 13500 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	45	9 + 12 + 12 + 12	7200 + 9600 + 9600 + 9600 (7000-40000)	36000	2880	13.86	~	12.53	12.5	7200 + 9600 + 9600 + 9600 (9000-42000)	36000	3700	17.81	~	16.10	9.7
	48	12 + 12 + 12 + 12	9000 + 9000 + 9000 + 9000 (7000-40000)	36000	2880	13.86	~	12.53	12.5	9000 + 9000 + 9000 + 9000 (9000-42000)	36000	3700	17.81	~	16.10	9.7

**3.7.1 QUADRUPLE SYSTEM MULTI R.A.C. RAM-G36N4HAA
INDOOR UNITS COMBINATIONS TO BE ABLE TO INSTALL**

NOMINAL COOLING CAPACITY(kW)	Indoor unit model	CAPACITY(Btu.) at one unit operation		SUITABLE ROOM SIZE(m ²) at one unit operation	
		Cooling	Heating	Cooling	Heating
7K Btu	RAK-DJ07QHAA	3050-9000	3050-10900	8-12	9-11
	RAI-GJ07QHAA	3050-8500	3050-10900	8-12	9-11
		3050-8500	3050-10900	8-12	9-11
		3050-8500	3050-10900	8-12	9-11
		3050-8500	3050-10900	8-12	9-11
9K Btu	RAK-DJ09QHAA	3050-10600	3050-15000	11-17	14-18
	RAK-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAD-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAI-GJ09QHAA	3050-10200	3050-18000	11-17	14-18
	RAF-FJ09QHAA	3050-10200	3050-18000	11-17	14-18
12K Btu	RAK-DJ12QHAA	3050-13650	3050-18000	16-24	17-22
	RAK-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAD-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAI-GJ12QHAA	3050-13650	3050-22500	16-24	17-22
	RAF-FJ12QHAA	3050-13650	3050-22500	16-24	17-22
18K Btu	RAK-DJ18QHAA	3050-17750	3050-27600	23-24	23-29
	RAK-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAD-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAI-GJ18QHAA	4100-19800	4100-23200	23-24	23-29
	RAF-FJ18QHAA	4100-19800	4100-23200	23-24	23-29
22K Btu	RAI-GJ22QHAA	4100-25600	4100-30690	23-24	23-29
24K Btu	RAK-DJ24QHAA	4100-25600	4100-30690	23-24	23-29
	RAK-GJ24QHAA	4100-25600	4100-30690	23-24	23-29
	RAD-GJ24QHAA	4100-25600	4100-30690	23-24	23-29
	RAF-FJ24QHAA	4100-25600	4100-30690	23-24	23-29

POSSIBLE COMBINATIONS TO OPERATE			SUITABLE ROOM SIZE TO INSTALL (m ²)	CONNECTING POSITION ON OUTDOOR UNIT (VALVE DIAMETER) Inch(mm)			
				NO.1	NO.2	NO.3	NO.4
				1/4"(6.35)/3/8"(9.52)D	1/4"(6.35)/3/8"(9.52)D	1/4"(6.35)/3/8"(9.52)D	1/4"(6.35)/1/2"(12.7)D
TWO UNIT	14K	7K+7K	(8-12)+(8-12)	7K	7K		
	16K	7K+9K	(8-12)+(11-17)	7K	9K		
	19K	7K+12K	(8-12)+(16-24)	7K	12K		
	25K	7K+18K	(8-12)+(20-24)	7K			18K
	29K	7K+22K	(8-12)+(20-24)	7K			22K
	31K	7K+24K	(8-12)+(20-24)	7K			⊙24K
	18K	9K+9K	(11-17)+(11-17)	9K	9K		
	21K	9K+12K	(11-17)+(16-24)	9K	12K		
	27K	9K+18K	(11-17)+(20-24)	9K			18K
	31K	9K+22K	(11-17)+(23-24)	9K			22K
	33K	9K+24K	(11-17)+(23-24)	9K			⊙24K
	24K	12K+12K	(16-24)+(16-24)	12K	12K		
	30K	12K+18K	(16-24)+(20-24)	12K			18K
	34K	12K+22K	(16-24)+(23-24)	12K			22K
	36K	12K+24K	(16-24)+(23-24)	12K			⊙24K
	36K	18K+18K	(20-24)+(20-24)			○18K	18K
	40K	18K+22K	(20-24)+(23-24)			○18K	22K
	42K	18K+24K	(20-24)+(23-24)			○18K	⊙24K
44K	22K+22K	(23-24)+(23-24)			○⊙22K	22K	
46K	22K+24K	(23-24)+(23-24)			○⊙24K	22K	
48K	24K+24K	(23-24)+(23-24)			○⊙24K	⊙24K	
THREE UNIT	21K	7K+7K+7K	(8-12)+(8-12)+(8-12)	7K	7K	7K	
	23K	7K+7K+9K	(8-12)+(8-12)+(11-17)	7K	7K	9K	
	26K	7K+7K+12K	(8-12)+(8-12)+(16-24)	7K	7K	12K	
	32K	7K+7K+18K	(8-12)+(8-12)+(20-24)	7K	7K		18K
	36K	7K+7K+22K	(8-12)+(8-12)+(23-24)	7K	7K		22K
	38K	7K+7K+24K	(8-12)+(8-12)+(23-24)	7K	7K		⊙24K
	25K	7K+9K+9K	(8-12)+(11-17)+(11-17)	7K	9K	9K	
	28K	7K+9K+12K	(8-12)+(11-17)+(16-24)	7K	9K	12K	
	34K	7K+9K+18K	(8-12)+(11-17)+(20-24)	7K	9K		18K
	38K	7K+9K+22K	(8-12)+(11-17)+(23-24)	7K	9K		22K
	40K	7K+9K+24K	(8-12)+(11-17)+(23-24)	7K	9K		⊙24K
	31K	7K+12K+12K	(8-12)+(16-24)+(16-24)	7K	12K	12K	
	37K	7K+12K+18K	(8-12)+(16-24)+(20-24)	7K	12K		18K
	41K	7K+12K+22K	(8-12)+(16-24)+(23-24)	7K	12K		22K
	43K	7K+12K+24K	(8-12)+(16-24)+(23-24)	7K	12K		⊙24K
	43K	7K+18K+18K	(8-12)+(20-24)+(20-24)	7K		○18K	18K
	47K	7K+18K+22K	(8-12)+(20-24)+(23-24)	7K		○18K	22K
	27K	9K+9K+9K	(11-17)+(11-17)+(11-17)	9K	9K	9K	
	30K	9K+9K+12K	(11-17)+(11-17)+(16-24)	9K	9K	12K	
	36K	9K+9K+18K	(11-17)+(11-17)+(20-24)	9K	9K		18K
	40K	9K+9K+22K	(11-17)+(11-17)+(23-24)	9K	9K		22K
	42K	9K+9K+24K	(11-17)+(11-17)+(23-24)	9K	9K		⊙24K
	33K	9K+12K+12K	(11-17)+(16-24)+(16-24)	9K	12K	12K	
	39K	9K+12K+18K	(11-17)+(16-24)+(20-24)	9K	12K		18K
	43K	9K+12K+22K	(11-17)+(16-24)+(23-24)	9K	12K		22K
	45K	9K+12K+24K	(11-17)+(16-24)+(23-24)	9K	12K		⊙24K
	45K	9K+18K+18K	(11-17)+(20-24)+(20-24)	9K		○18K	18K
	36K	12K+12K+12K	(16-24)+(16-24)+(16-24)	12K	12K	12K	
	42K	12K+12K+18K	(16-24)+(16-24)+(20-24)	12K	12K		18K
	46K	12K+12K+22K	(16-24)+(16-24)+(23-24)	12K	12K		22K
48K	12K+12K+24K	(16-24)+(16-24)+(23-24)	12K	12K		⊙24K	
48K	12K+18K+18K	(16-24)+(20-24)+(20-24)	12K		○18K	18K	

FOUR UNIT	28K	7K+7K+7K+7K	(8-12)+(8-12)+(8-12)+(8-12)	7K	7K	7K	●7K
	30K	7K+7K+7K+9K	(8-12)+(8-12)+(8-12)+(11-17)	7K	7K	7K	●9K
	33K	7K+7K+7K+12K	(8-12)+(8-12)+(8-12)+(16-24)	7K	7K	7K	●12K
	39K	7K+7K+7K+18K	(8-12)+(8-12)+(8-12)+(20-24)	7K	7K	7K	18K
	43K	7K+7K+7K+22K	(8-12)+(8-12)+(8-12)+(23-24)	7K	7K	7K	22K
	45K	7K+7K+7K+24K	(8-12)+(8-12)+(8-12)+(23-24)	7K	7K	7K	○24K
	32K	7K+7K+9K+9K	(8-12)+(8-12)+(11-17)+(11-17)	7K	7K	9K	●9K
	35K	7K+7K+9K+12K	(8-12)+(8-12)+(11-17)+(16-24)	7K	7K	9K	●12K
	41K	7K+7K+9K+18K	(8-12)+(8-12)+(11-17)+(20-24)	7K	7K	9K	18K
	45K	7K+7K+9K+22K	(8-12)+(8-12)+(11-17)+(23-24)	7K	7K	9K	22K
	47K	7K+7K+9K+24K	(8-12)+(8-12)+(11-17)+(23-24)	7K	7K	9K	○24K
	38K	7K+7K+12K+12K	(8-12)+(8-12)+(16-24)+(16-24)	7K	7K	12K	●12K
	44K	7K+7K+12K+18K	(8-12)+(8-12)+(16-24)+(20-24)	7K	7K	12K	18K
	48K	7K+7K+12K+22K	(8-12)+(8-12)+(16-24)+(23-24)	7K	7K	12K	22K
	34K	7K+9K+9K+9K	(8-12)+(11-17)+(11-17)+(11-17)	7K	9K	9K	●9K
	37K	7K+9K+9K+12K	(8-12)+(11-17)+(11-17)+(16-24)	7K	9K	9K	●12K
	43K	7K+9K+9K+18K	(8-12)+(11-17)+(11-17)+(20-24)	7K	9K	9K	18K
	47K	7K+9K+9K+22K	(8-12)+(11-17)+(11-17)+(23-24)	7K	9K	9K	22K
	40K	7K+9K+12K+12K	(8-12)+(11-17)+(16-24)+(16-24)	7K	9K	12K	●12K
	46K	7K+9K+12K+18K	(8-12)+(11-17)+(16-24)+(20-24)	7K	9K	12K	18K
	43K	7K+12K+12K+12K	(8-12)+(16-24)+(16-24)+(16-24)	7K	12K	12K	●12K
	36K	9K+9K+9K+9K	(11-17)+(11-17)+(11-17)+(11-17)	9K	9K	9K	●9K
	39K	9K+9K+9K+12K	(11-17)+(11-17)+(11-17)+(16-24)	9K	9K	9K	●12K
	45K	9K+9K+9K+18K	(11-17)+(11-17)+(11-17)+(20-24)	9K	9K	9K	18K
	42K	9K+9K+12K+12K	(11-17)+(11-17)+(16-24)+(16-24)	9K	9K	12K	●12K
	48K	9K+9K+12K+18K	(11-17)+(11-17)+(16-24)+(20-24)	9K	9K	12K	18K
	45K	9K+12K+12K+12K	(11-17)+(16-24)+(16-24)+(16-24)	9K	12K	12K	●12K
	48K	12K+12K+12K+12K	(16-24)+(16-24)+(16-24)+(16-24)	12K	12K	12K	●12K

Legend:

Piping Size	Adaptor size	
Inch (mm)		
1/4"(6.35)	○	3s to 4s
3/8"(9.52)	◎	4s to 5s
1/2"(12.7)	●	4s to 3s
5/8"(15.88)		

- Climate is in the temperate zone like Tokyo, Japan.
- For usual residential use.
- Smaller figure is for light construction which means light thermally sealed.
- Larger figure is for heavy constructions, which means well thermally sealed.

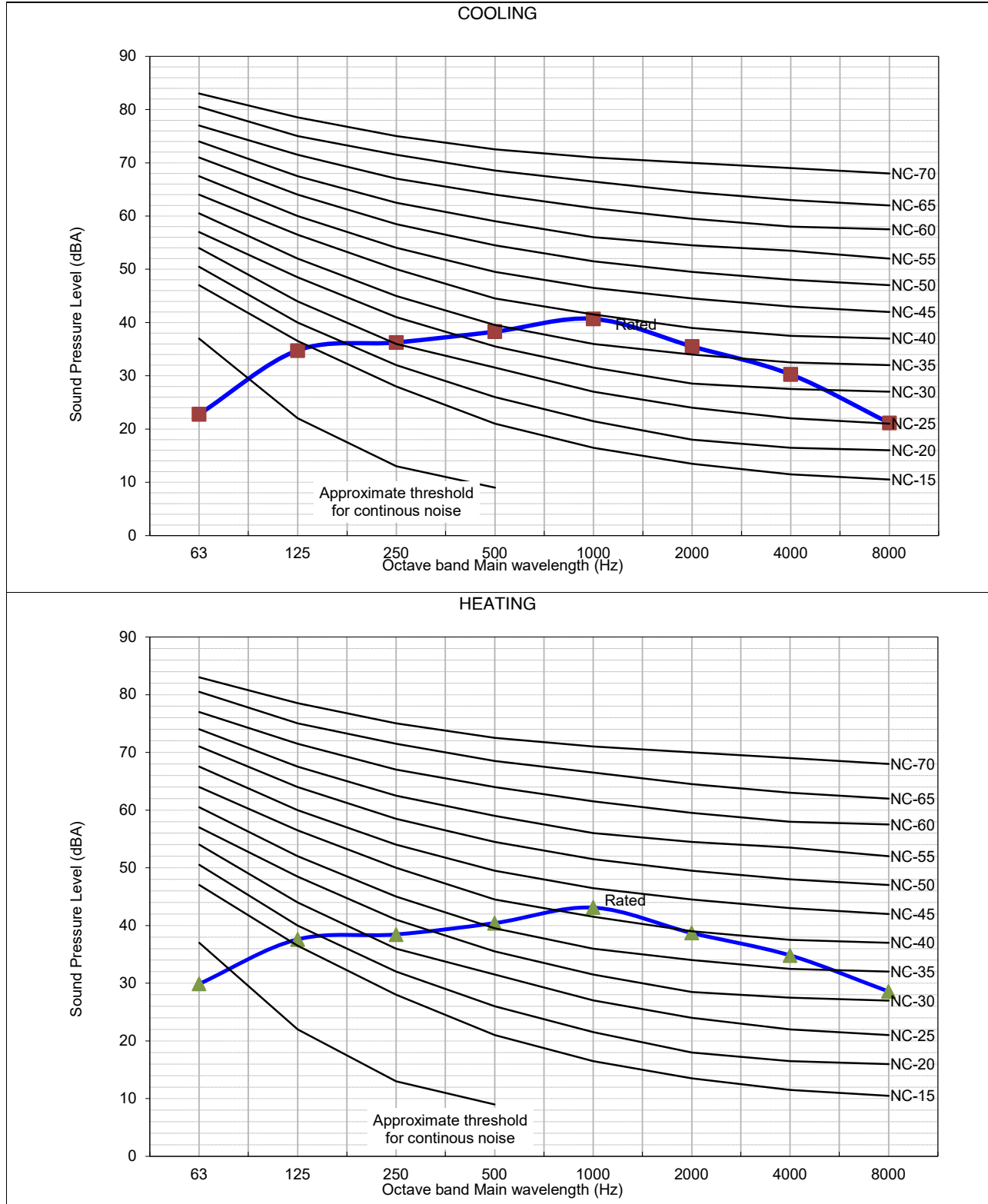
4 SOUND DATA

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4 SOUND DATA

4.1. RAM-G18N2HAA

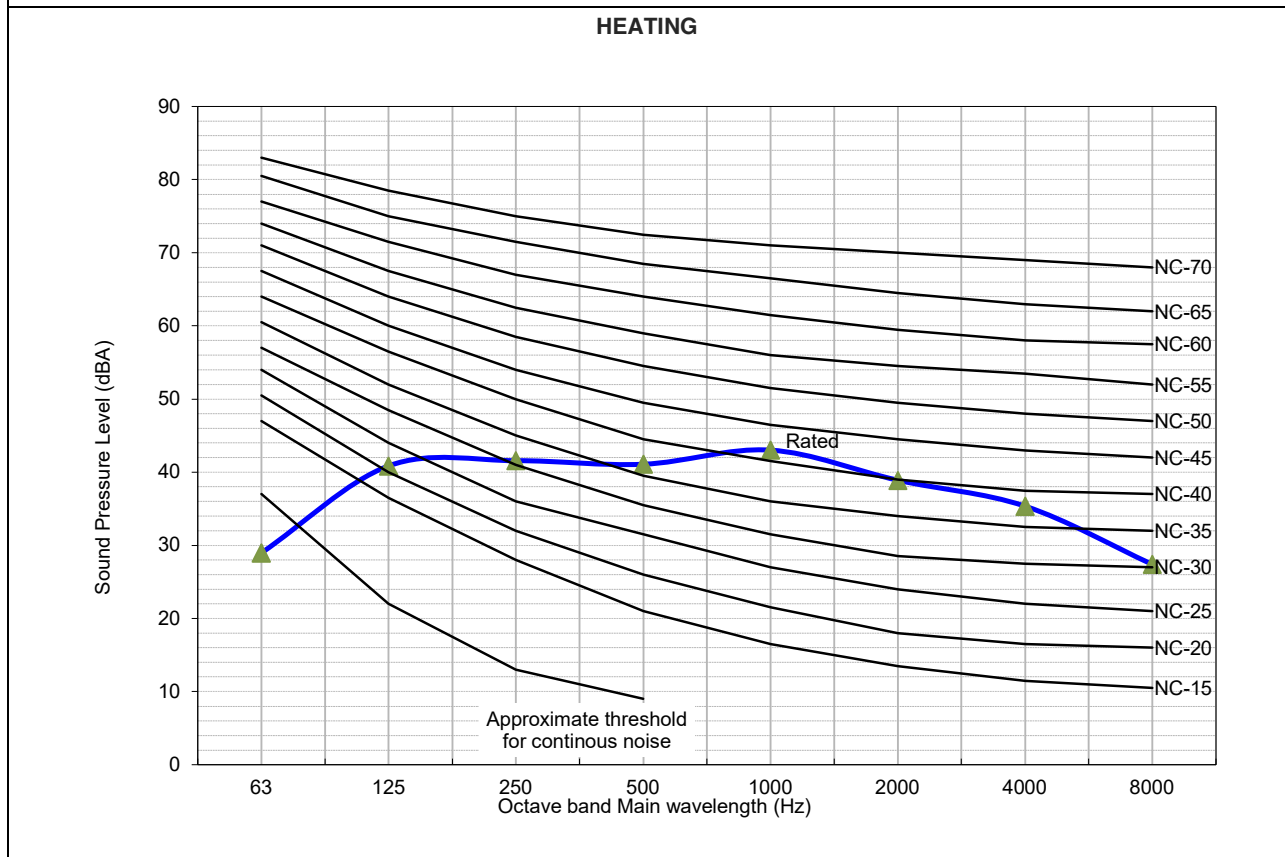
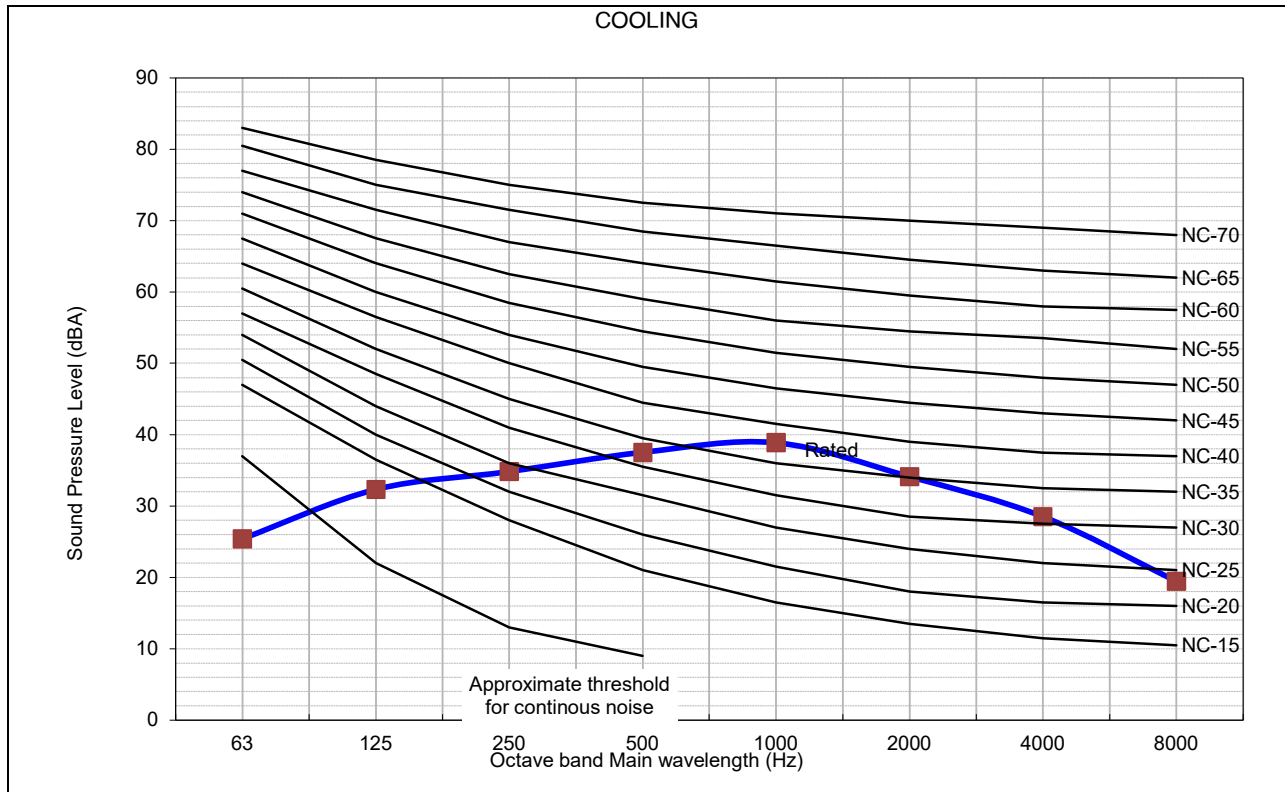


The Sound Pressure Level is based on the following conditions:

- 1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

4.2. RAM-G24N3HAA

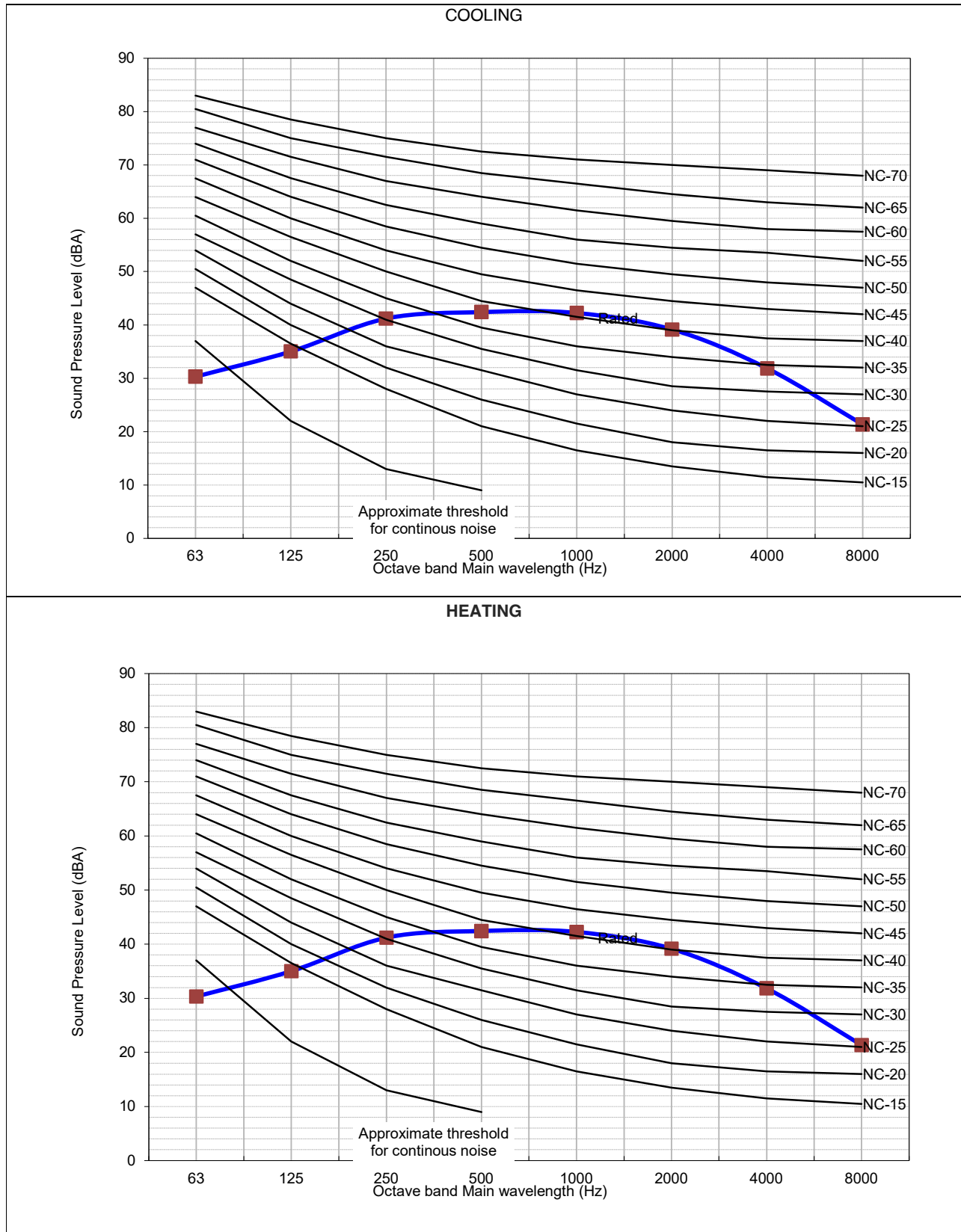


The Sound Pressure Level is based on the following conditions:

- 1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

4.3. RAM-G36N4HAA



The Sound Pressure Level is based on the following conditions:

- 1 meter from the unit front surface and 1 meter from floor level

The above data was measured in an anechoic chamber. Please take into consideration reflected sound of your specific site

5 WORKING RANGE

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5.1. POWER SUPPLY

Working Voltage	198V ~ 264V
Voltage Imbalance	Within a 3% Deviation from Each Voltage at the Main Terminal of Outdoor Unit
Starting Voltage	Higher than 85% of the Rated Voltage

5.2. WORKING RANGE

5.2.1. MULTIZONE

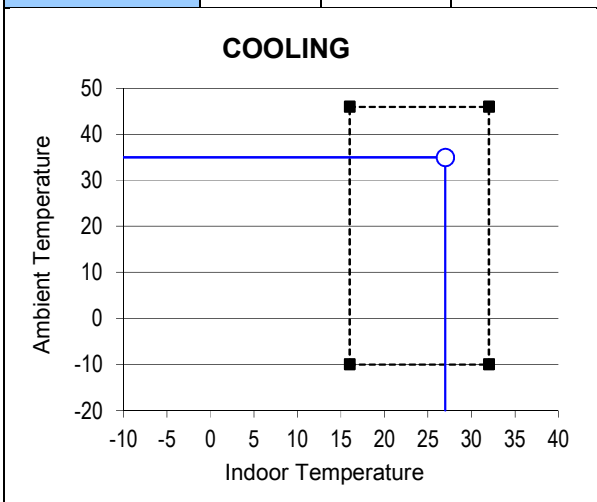
Applicable models:

MULTIZONE
RAM-G18N2HAA
RAM-G24N3HAA
RAM-G36N4HAA

The temperature range is indicated in the following table.

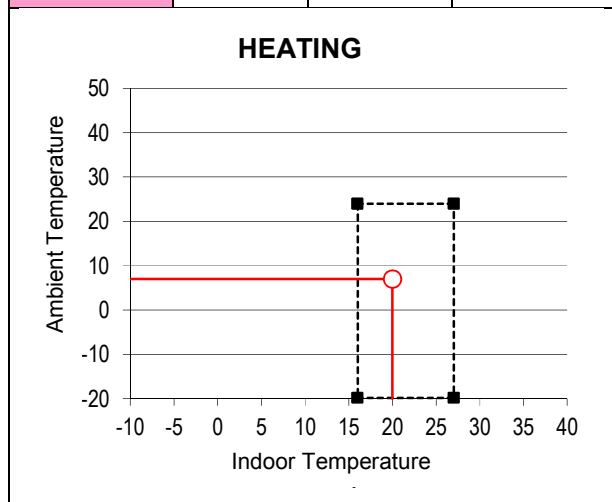
Cooling

working range	min (°C)	max (°C)	rated (°C)
outdoor	-10	46	35
indoor	16	32	26.67



Heating

working range	min (°C)	max (°C)	rated (°C)
outdoor	-20	24	8.33
indoor	16	27	21.11



6 ELECTRICAL DATA

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6.2.	OUTDOOR UNIT	6-3

6.1. INDOOR UNIT

Model	Unit Main Power	Rated input current of power conversion equipment	Indoor Fan Motor	
	VOL, PH, Hz		RNC	IPT
RAK-DJ07QHAA	208-230, 1, 60	0.45	0.67	38
RAK-DJ09RHAA	208-230, 1, 60	0.45	0.67	38
RAK-DJ12RHAA	208-230, 1, 60	0.45	0.67	38
RAK-DJ18RHAA	208-230, 1, 60	0.45	0.67	38
RAK-DJ24RHAA	208-230, 1, 60	0.56	0.16	45
RAK-GJ07QHAA	208-230, 1, 60	0.62	0.67	30
RAK-GJ09QHAA	208-230, 1, 60	0.62	0.67	30
RAK-GJ12QHAA	208-230, 1, 60	0.62	0.67	30
RAK-GJ18QHAA	208-230, 1, 60	0.64	0.16	45
RAK-GJ24QHAA	208-230, 1, 60	0.64	0.16	45
RAF-FJ07QHAA	208-230, 1, 60	0.25	0.75	38
RAF-FJ09QHAA	208-230, 1, 60	0.25	0.75	38
RAF-FJ12QHAA	208-230, 1, 60	0.25	0.75	38
RAF-FJ18QHAA	208-230, 1, 60	0.25	0.75	38
RAI-GJ07QHAA	208-230, 1, 60	0.80	0.25	57
RAI-GJ09QHAA	208-230, 1, 60	0.80	0.25	57
RAI-GJ12QHAA	208-230, 1, 60	0.80	0.25	57
RAI-GJ18QHAA	208-230, 1, 60	0.80	0.25	57
RAI-GJ24QHAA	208-230, 1, 60	0.80	0.25	57
RAD-GJ07QHAA	208-230, 1, 60	0.45	0.11	20
RAD-GJ09QHAA	208-230, 1, 60	0.45	0.11	20
RAD-GJ12QHAA	208-230, 1, 60	0.45	0.11	20
RAD-GJ18QHAA	208-230, 1, 60	1.2	0.75	180
RAD-GJ24QHAA	208-230, 1, 60	1.2	0.75	180

VOL: Rated Unit Power Supply Voltage (V)
Hz: Frequency (Hz)

RNC: Running Current (A)
PH: Phase (φ)
IPT: Input (W)

6.2. OUTDOOR UNIT

Model	Unit Main Power		Electrical Data			
	VOL, PH, Hz	Rated input current of power conversion equipment (A)	Rated Cooling Current	Rated Heating Current	MCA	MOP
RAM-G18N2HAA	208-230, 1, 60	25	6.36	8.63	16A	25A
RAM-G24N3HAA	208-230, 1, 60	30	8.47	8.87	19A	30A
RAM-G36N4HAA	208-230, 1, 60	40	13.24	13.31	24A	40A

VOL: Rated Unit Power Supply Voltage (V)

HZ: Frequency (Hz)

STC: Starting Current (A)

RNC: Running Current (A)

PH: Phase (ϕ)

IPT: Input (W)

NOTE:

1. The above compressor data is based on 100% capacity combination of indoor units at the rated operating frequency
2. This data is based on the same conditions as the nominal heating and cooling capacities.
3. The compressor started by an inverter, resulting in extremely low starting current.

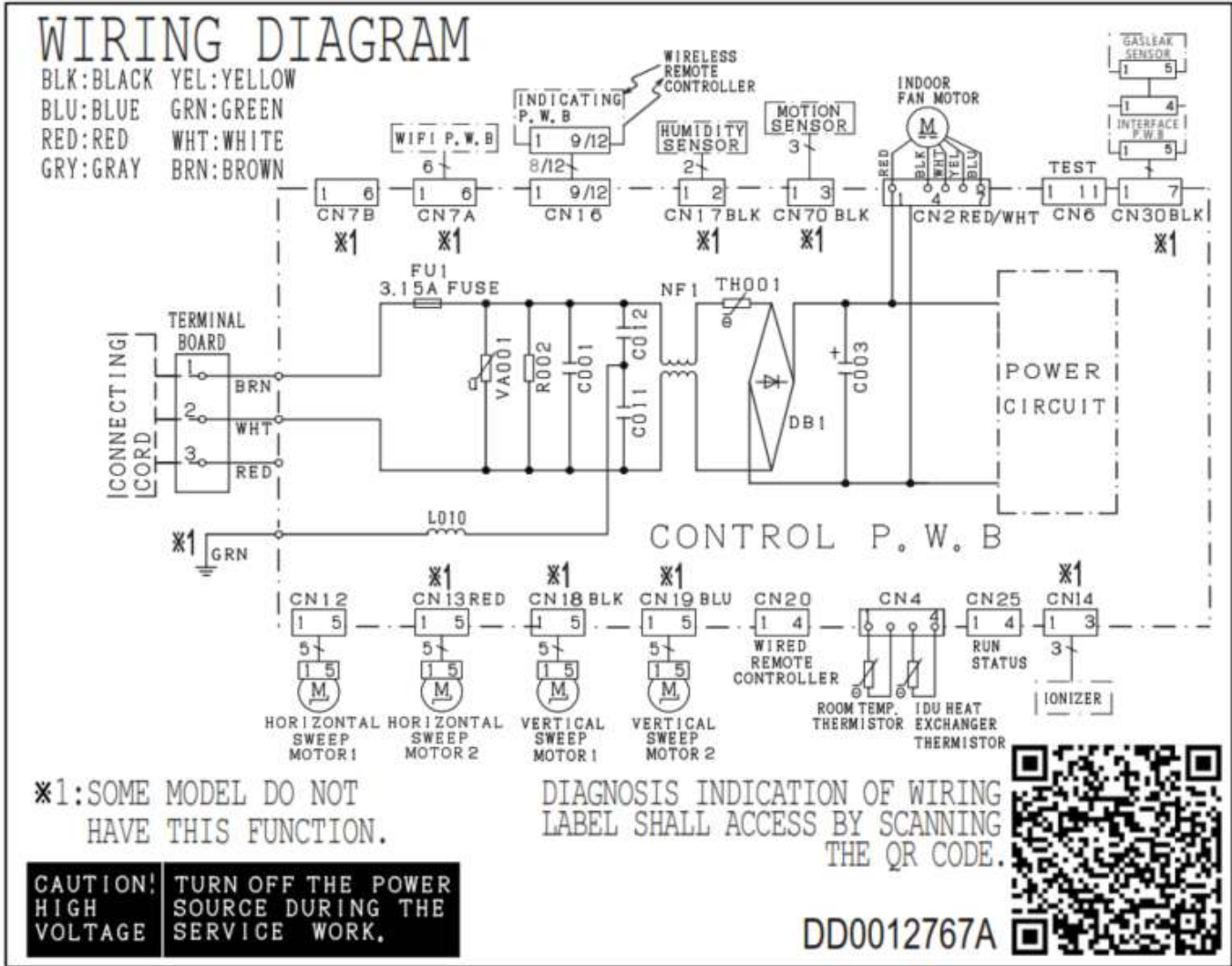
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7.2.	RAM-G18N2HAA	7- 10
7.3.	RAM-G24N3HAA	7- 11
7.4.	RAM-G36N4HAA	7- 12

7.1. MULTIZONE

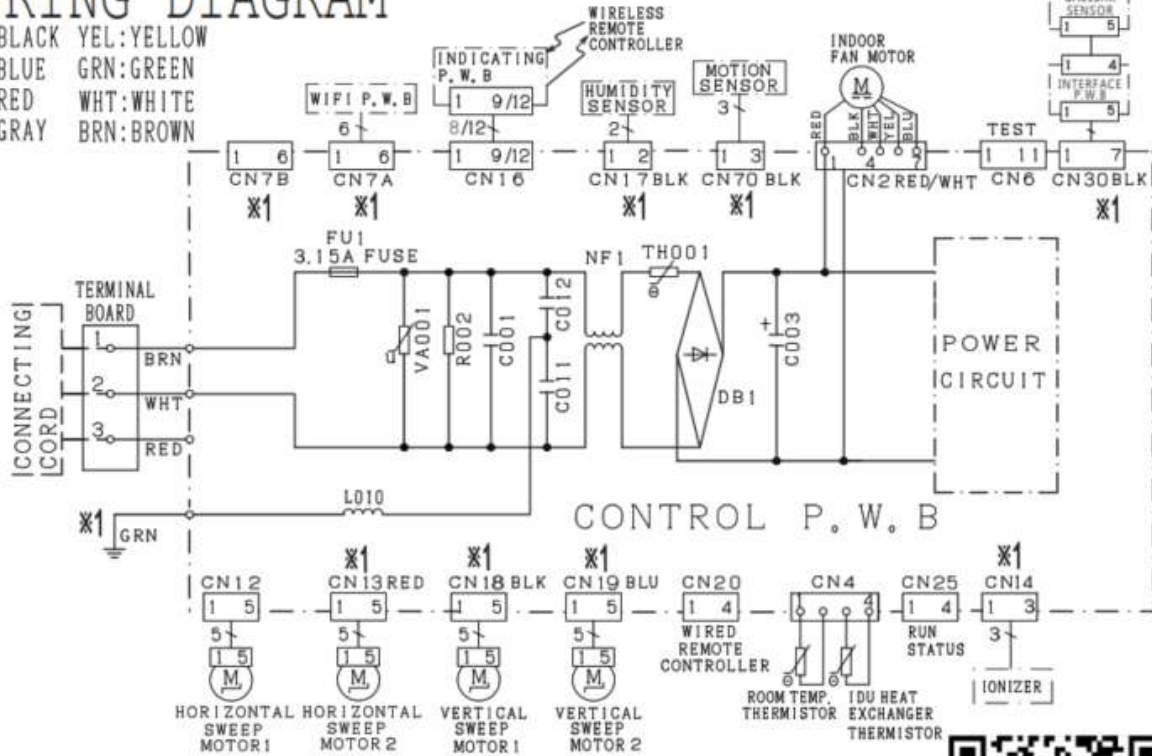
7.1.1. RAK-DJ07QHAA, RAK-DJ09/12/18RHAA



7.2. RAK-DJ18PHAA / RHAA

WIRING DIAGRAM

BLK:BLACK YEL:YELLOW
 BLU:BLUE GRN:GREEN
 RED:RED WHT:WHITE
 GRY:GRAY BRN:BROWN



*1: SOME MODEL DO NOT HAVE THIS FUNCTION.

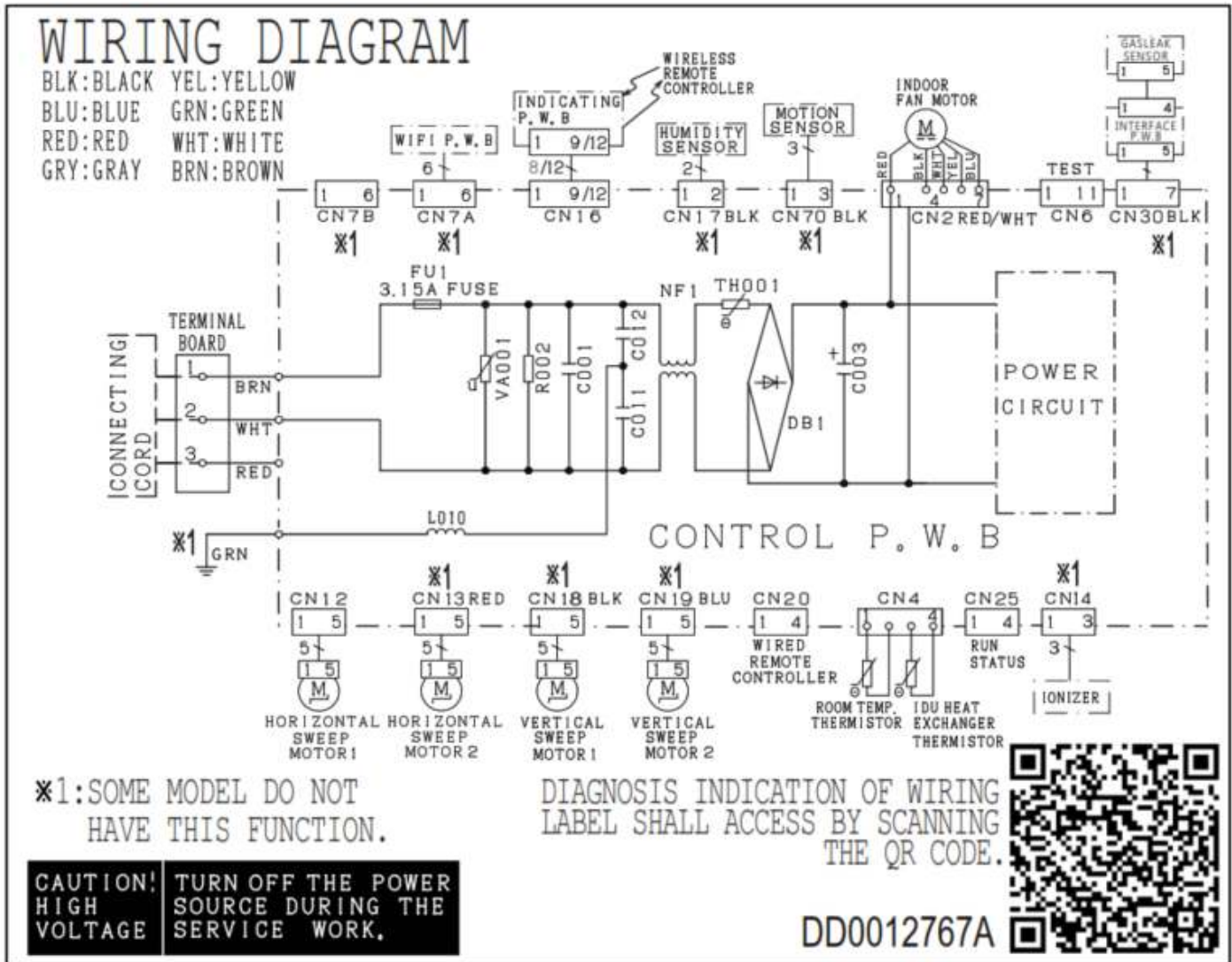
DIAGNOSIS INDICATION OF WIRING LABEL SHALL ACCESS BY SCANNING THE QR CODE.

CAUTION! TURN OFF THE POWER HIGH VOLTAGE SOURCE DURING THE SERVICE WORK.

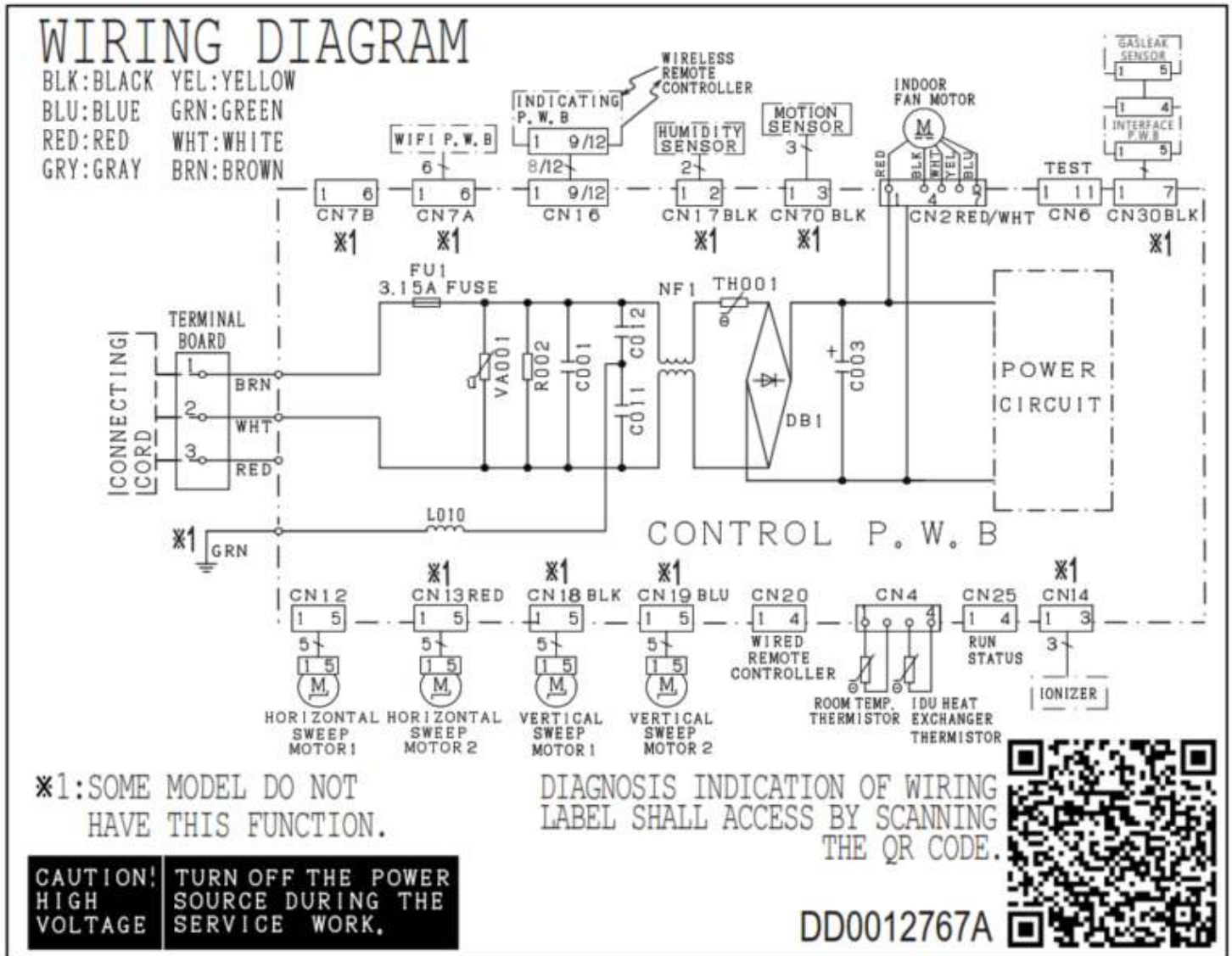
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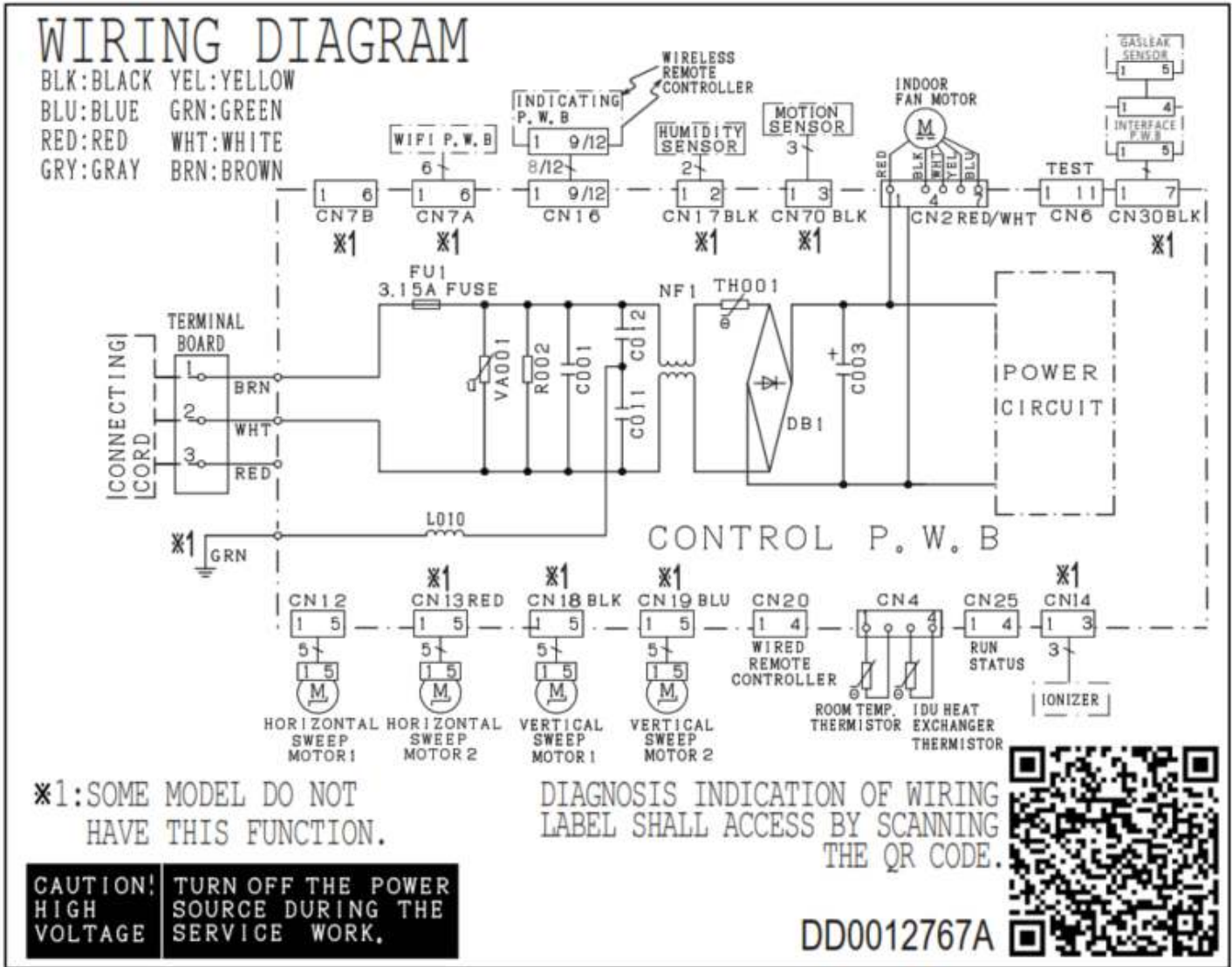
7.1.2. RAK-DJ24RHAA



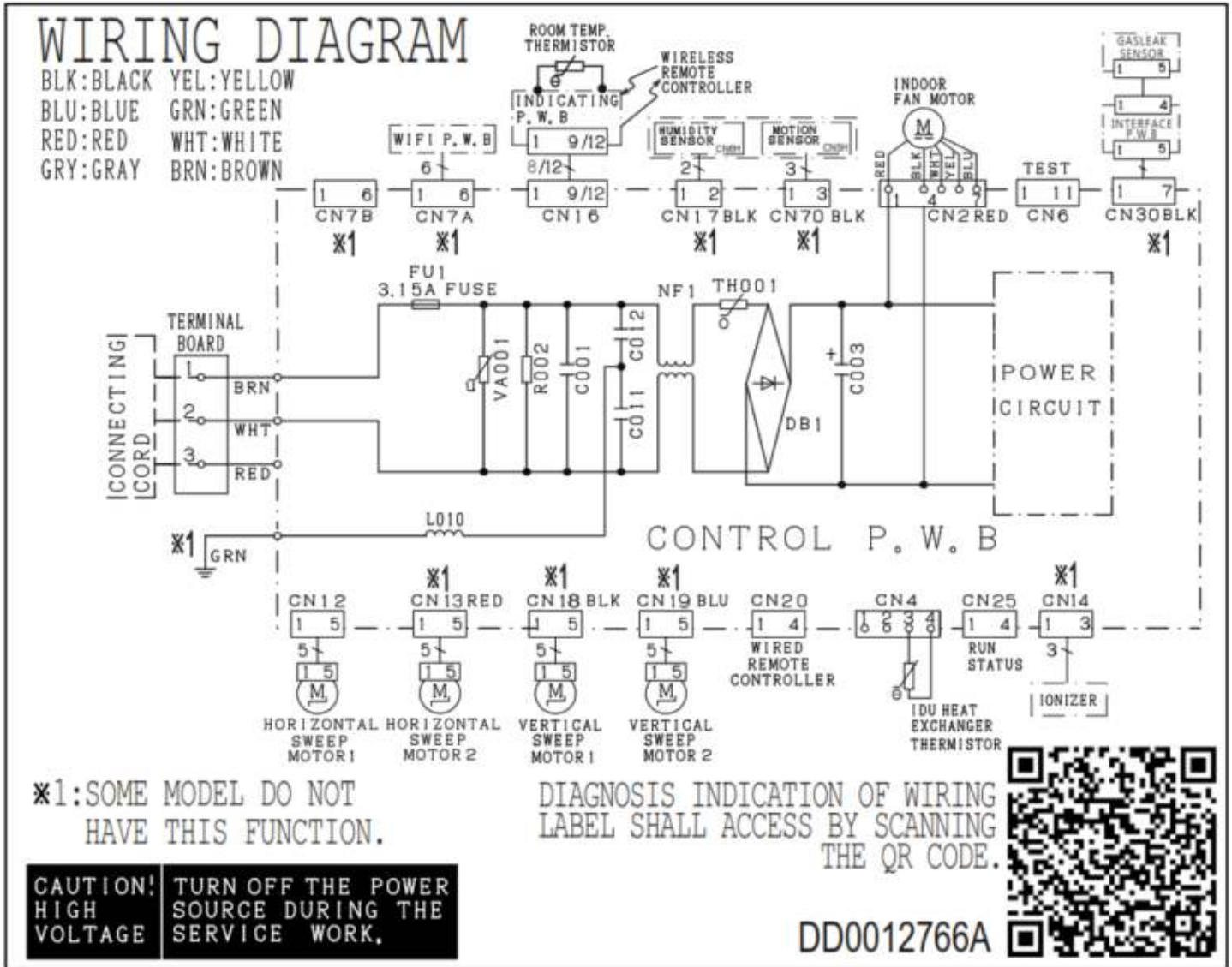
7.1.3. RAK-GJ07QHAA , RAK-GJ09QHAA , RAK-12QHAA



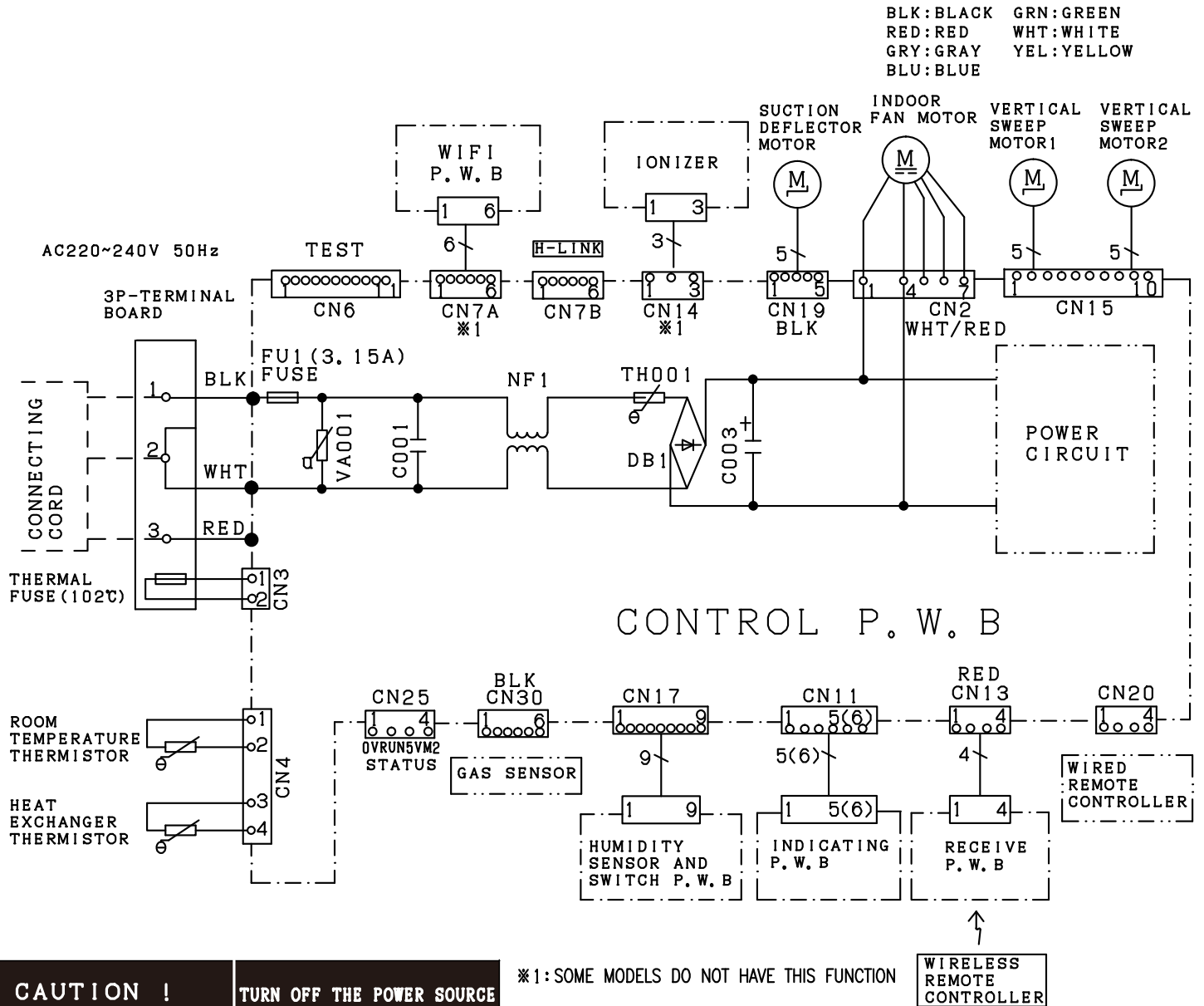
7.1.4. RAK-GJ18QHAA



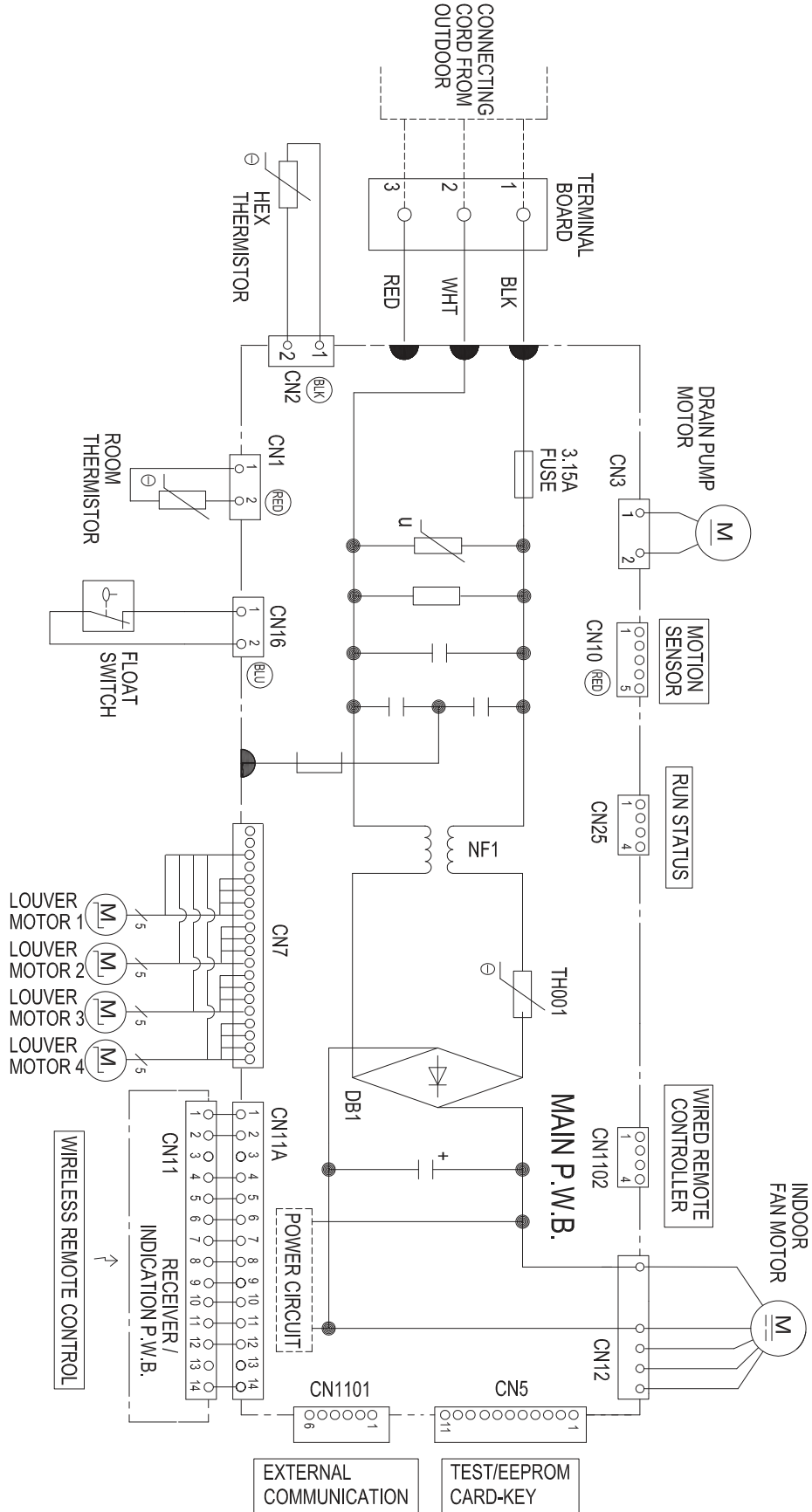
7.1.5. RAK-GJ24QHAA



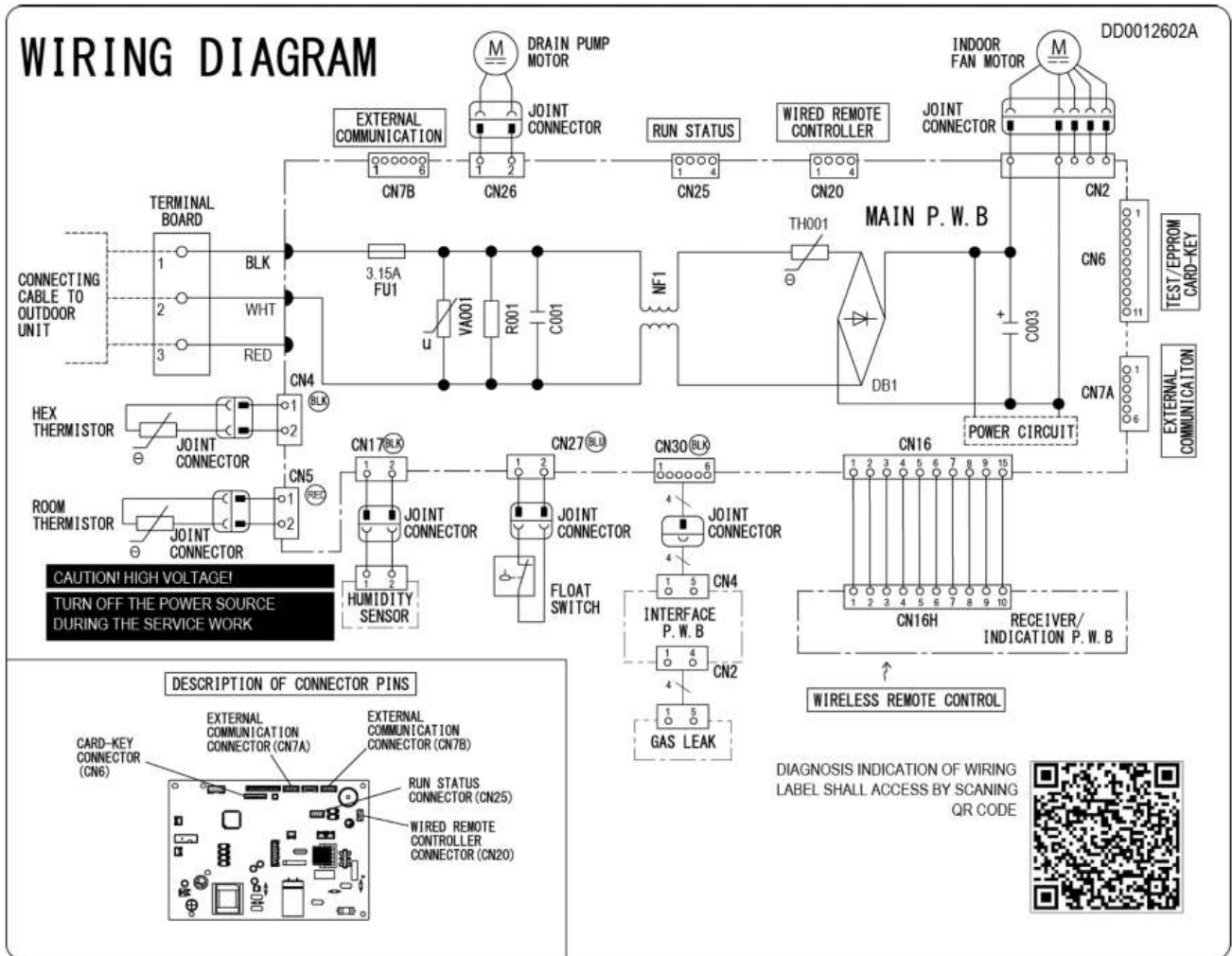
7.1.6. RAF-FJ07QHAA, RAF-FJ09QHAA, RAF-FJ12QHAA, RAF-FJ18QHAA



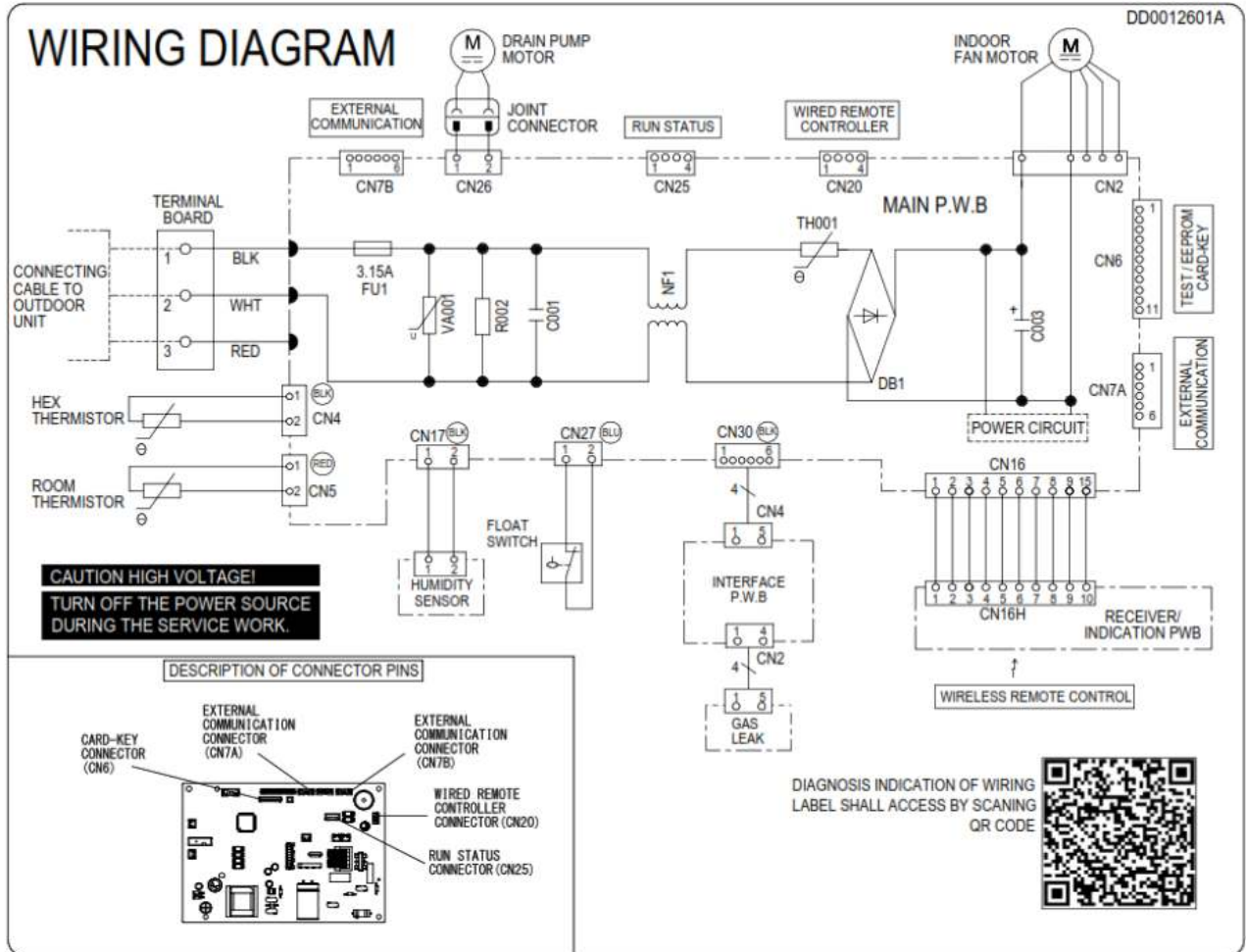
7.1.7. RAI-GJ07/09/12/18/24QHAA



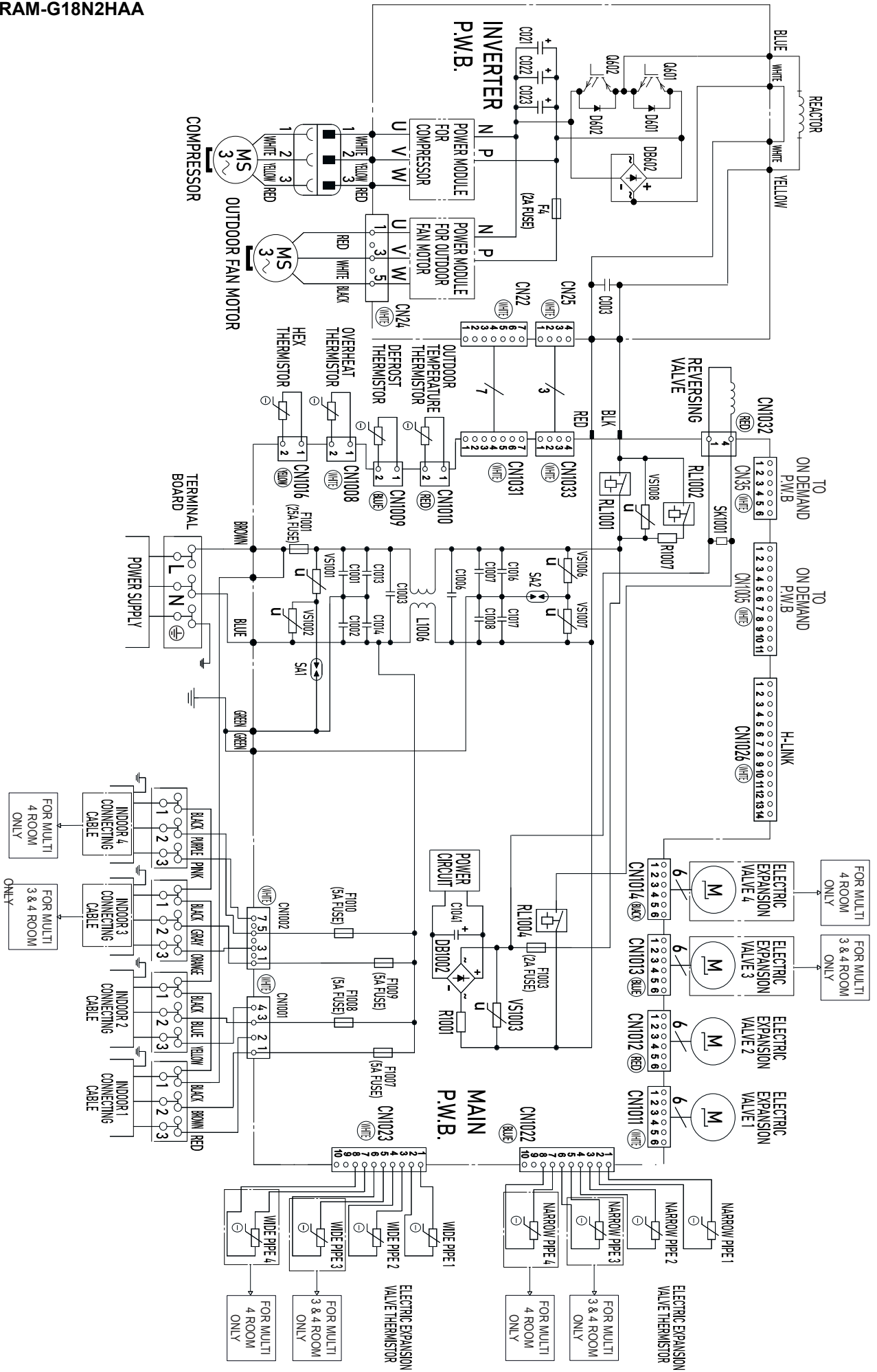
7.1.8. RAD-GJ07QHAA, RAD-GJ09QHAA, RAD-GJ12QHAA



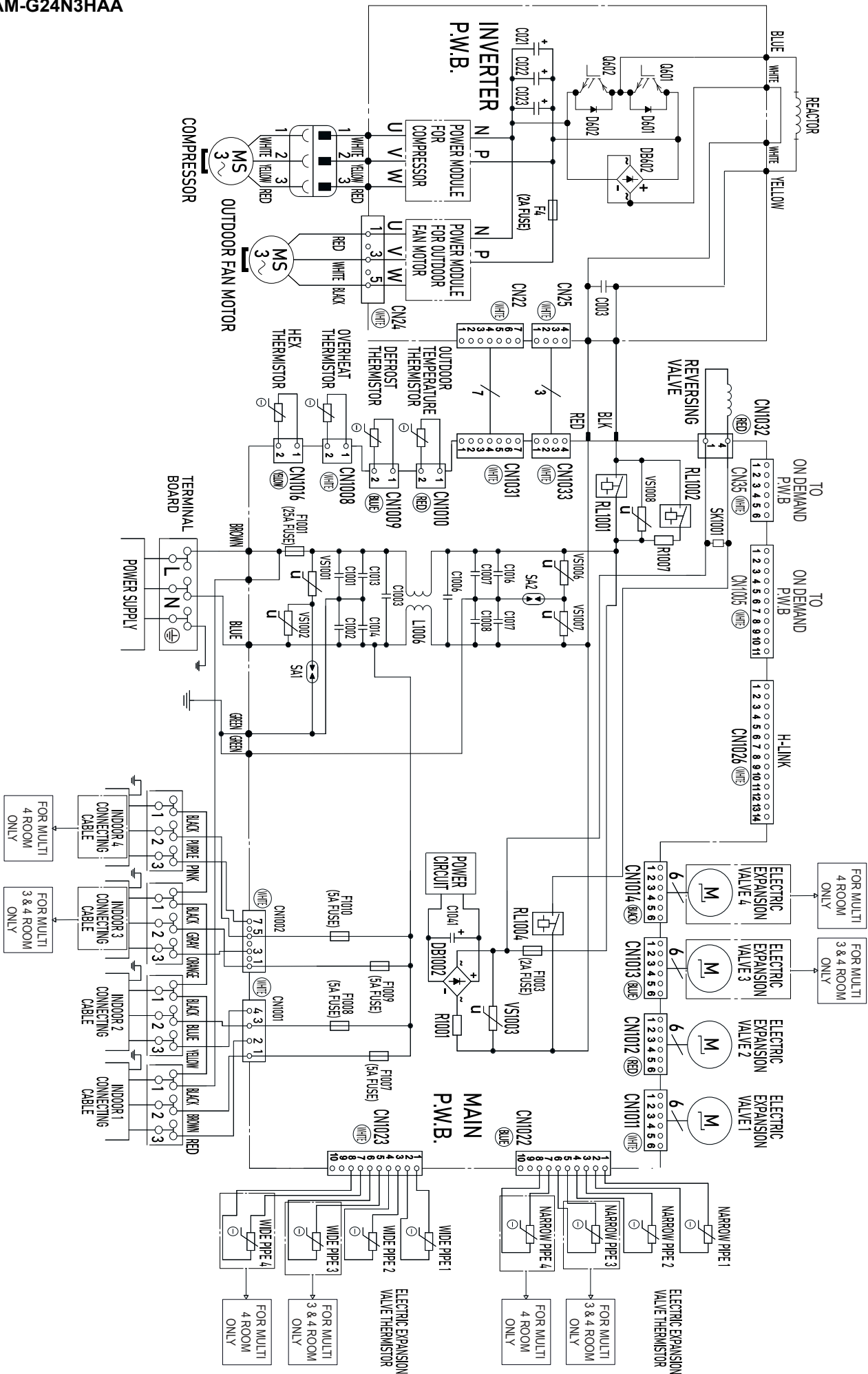
7.1.9. RAD-GJ18QHAA , RAD-GJ24QHAA



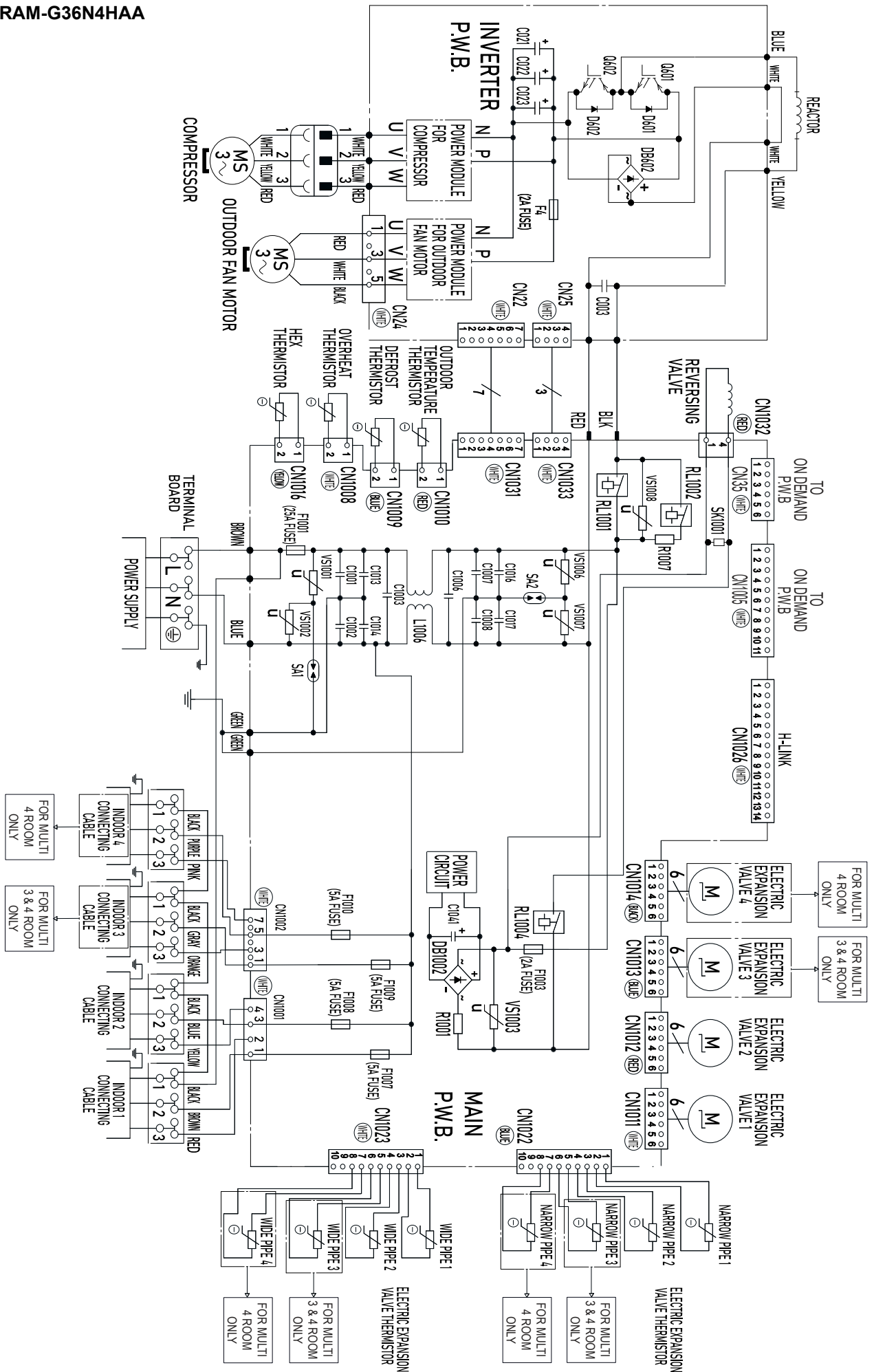
7.2 RAM-G18N2HAA



7.3 RAM-G24N3HAA



7.4 RAM-G36N4HAA



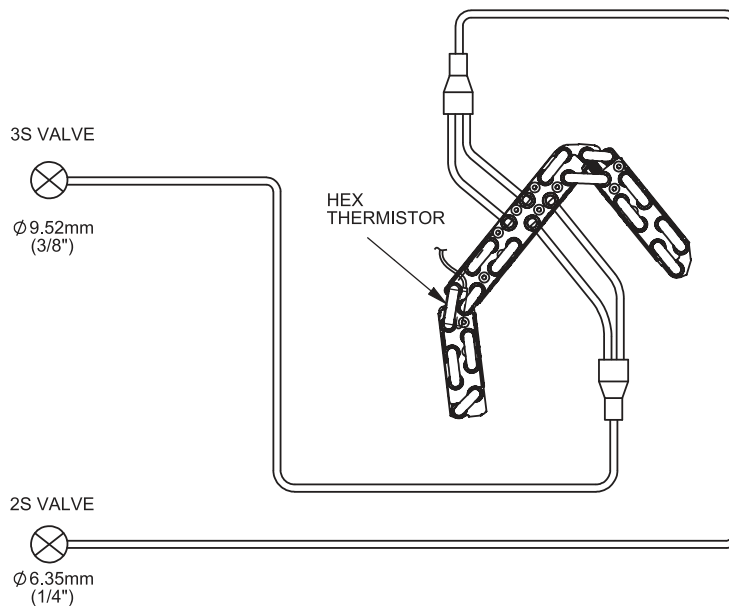
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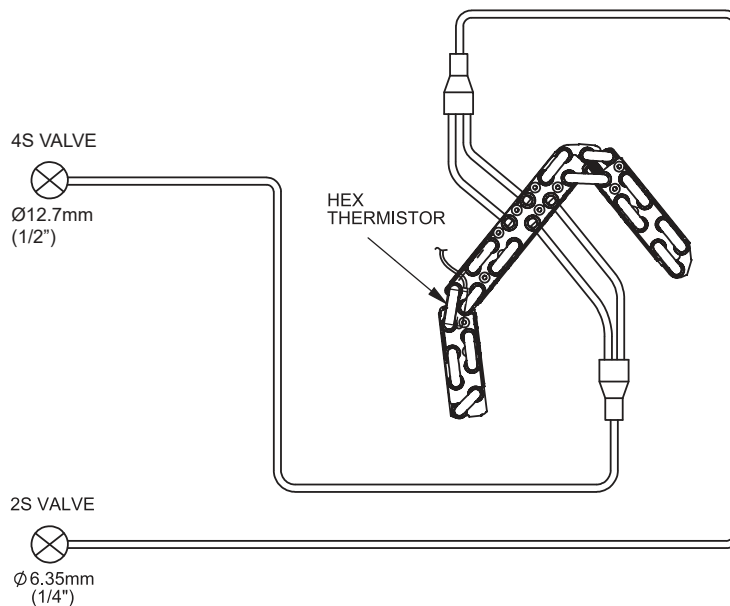
8.1. MULTIZONE INDOOR UNITS

8.1.1. WALL TYPE: RAK-DJ07QHAA,RAK-DJ09/12/18RHAA

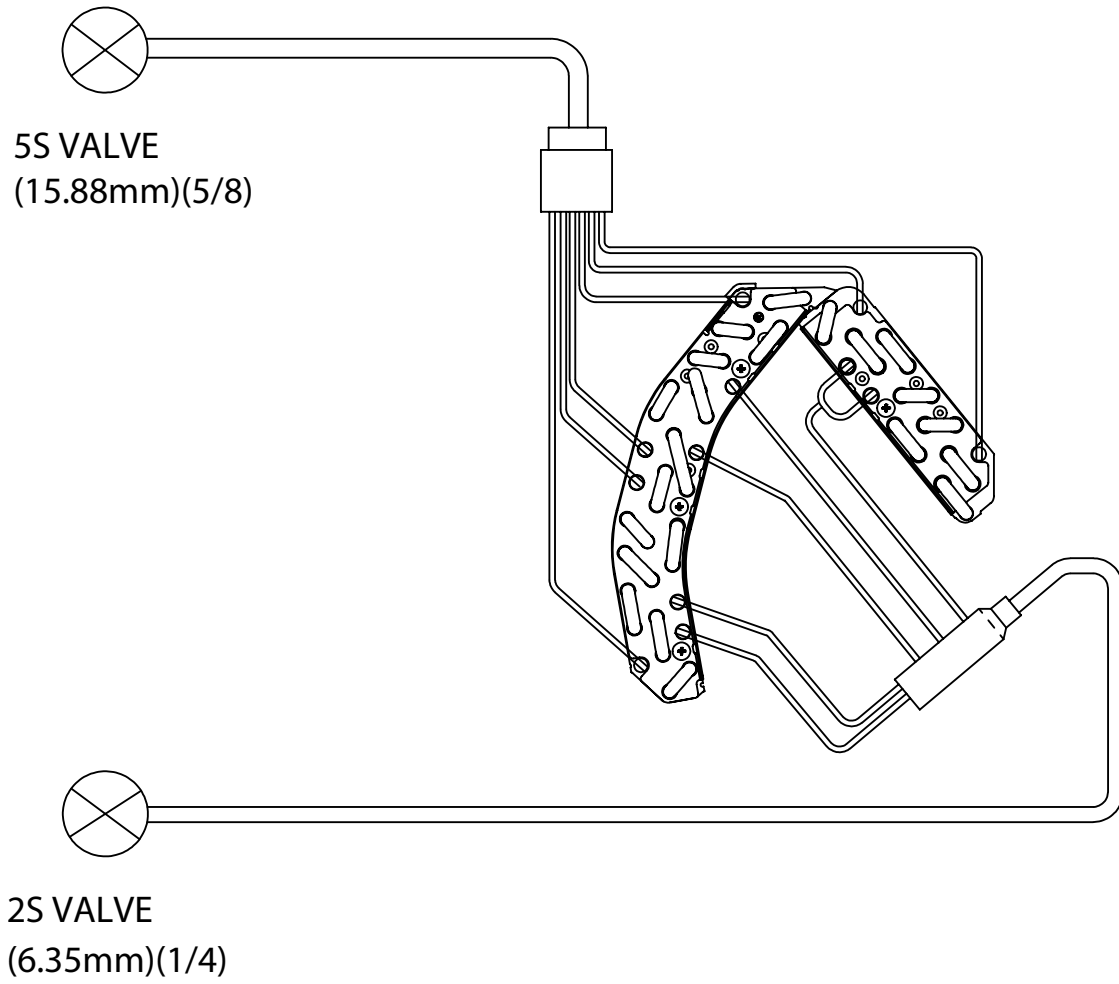
MODEL : RAK-DJ07QHAA
RAK-DJ09RHAA
RAK-DJ12RHAA



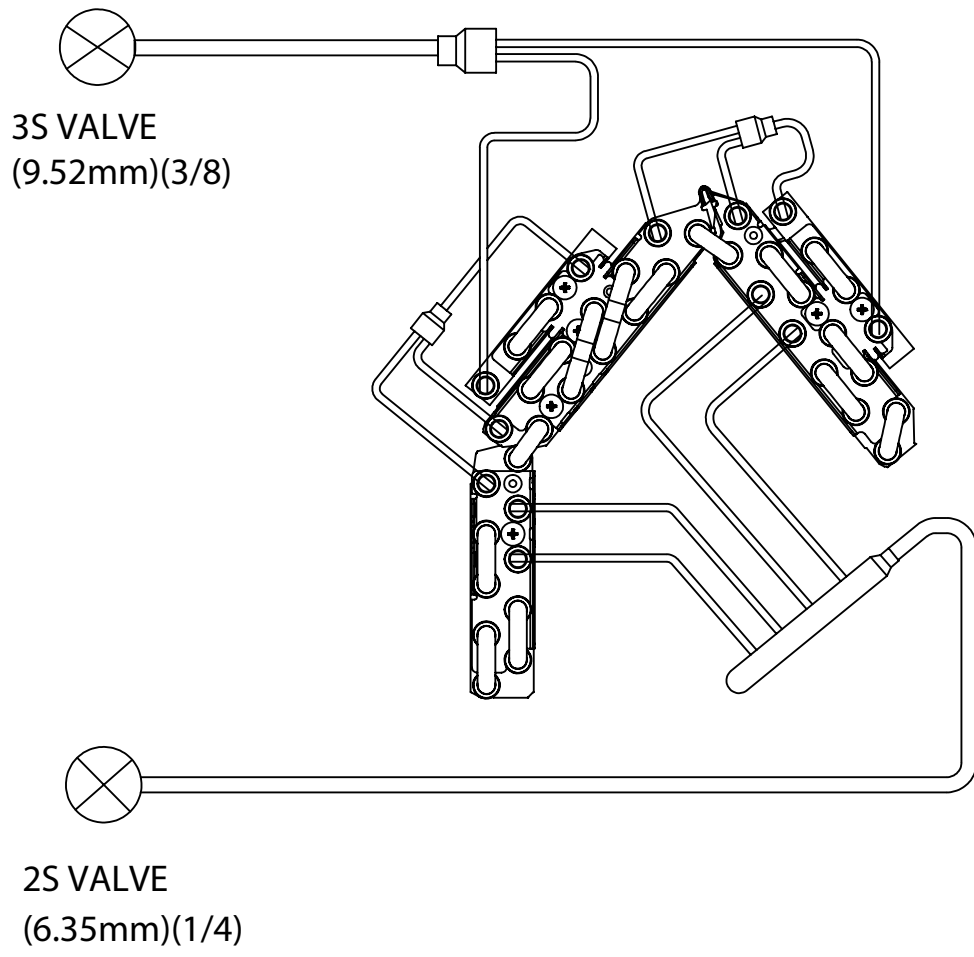
MODEL : RAK-DJ18RHAA



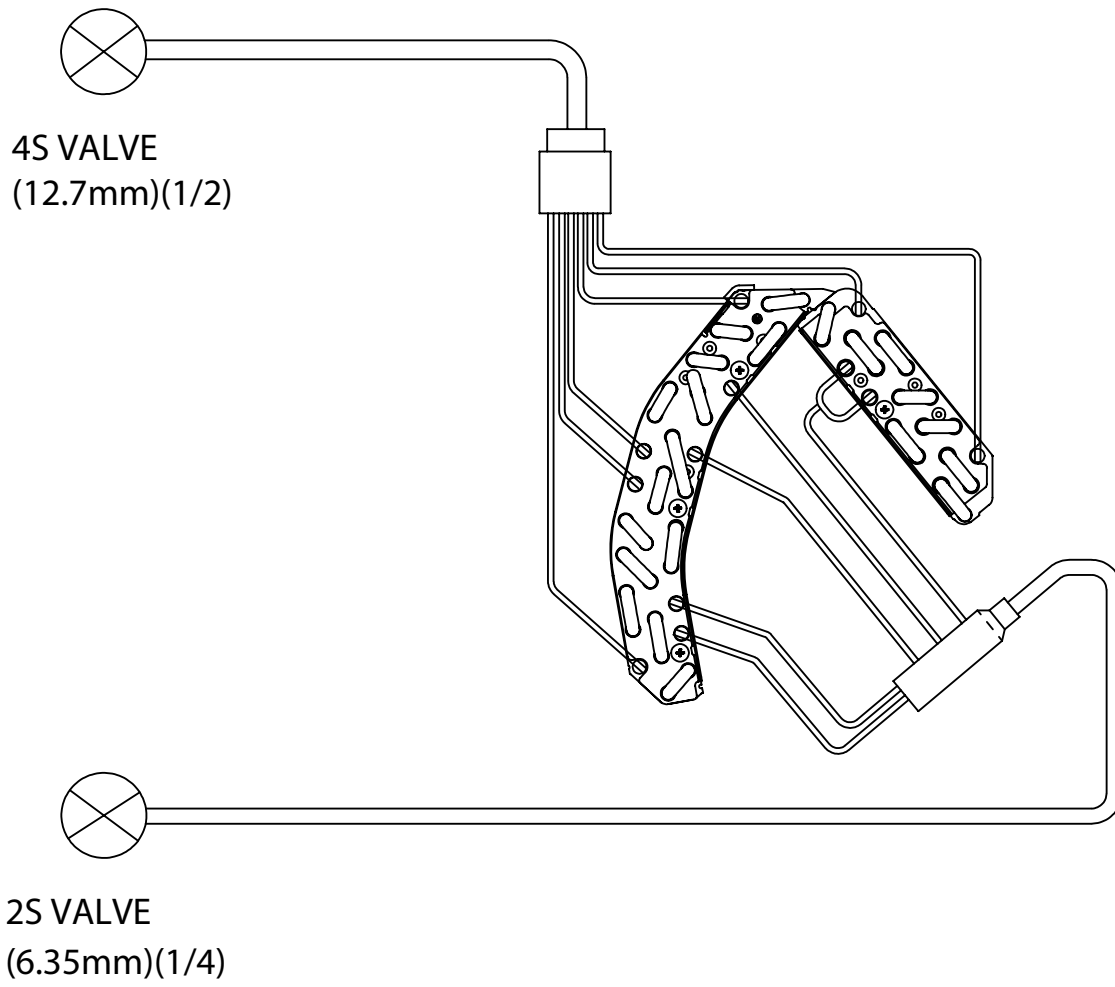
8.1.2. WALL TYPE: RAK-DJ24RHAA , RAK-GJ24QHAA



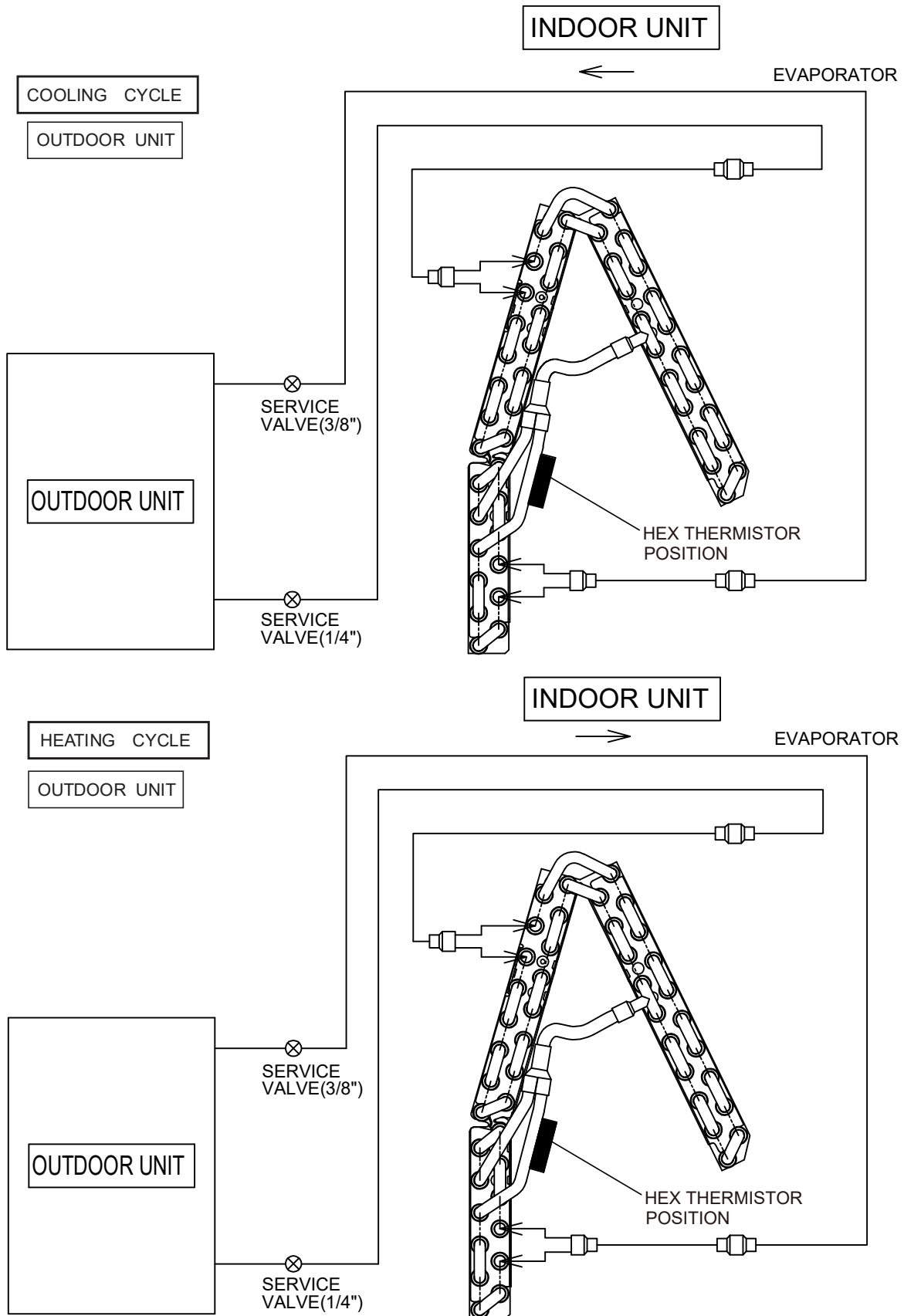
8.1.3. WALL TYPE: RAK-GJ07QHAA , RAK-GJ09/12QHAA



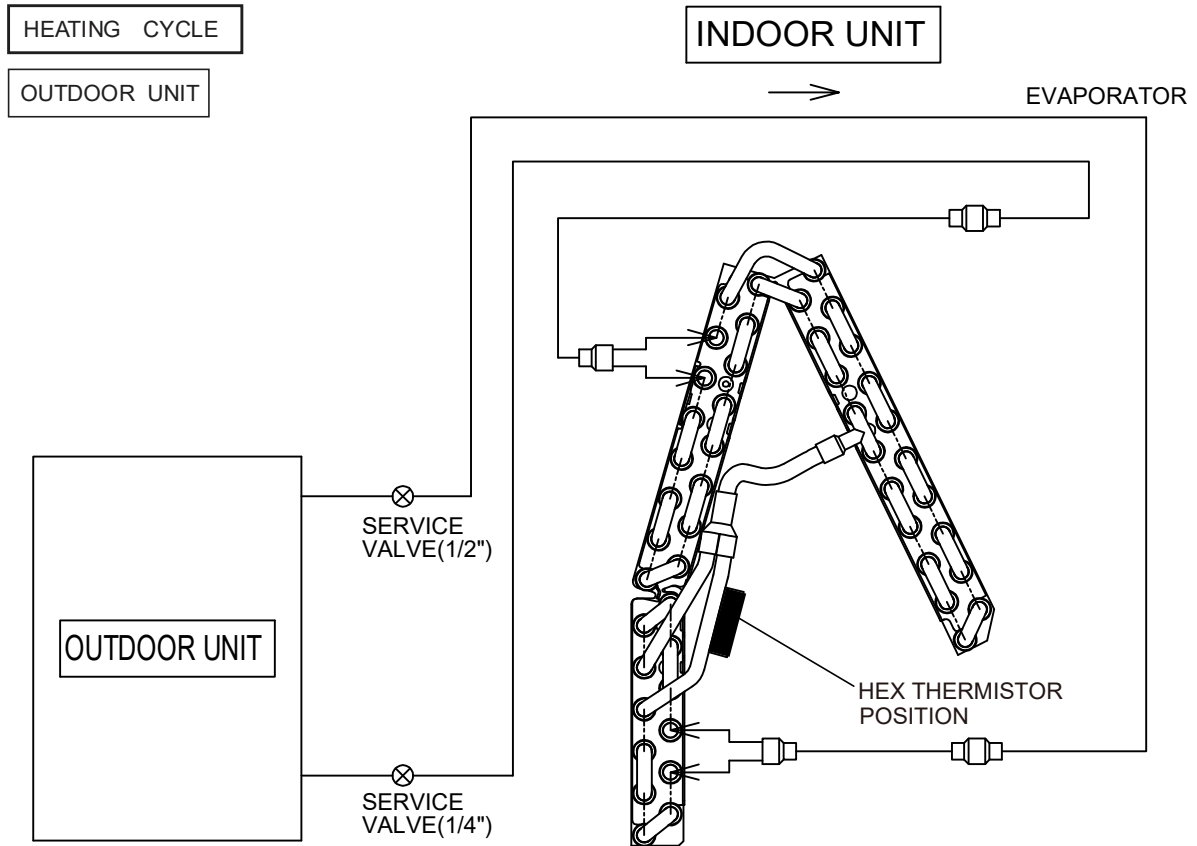
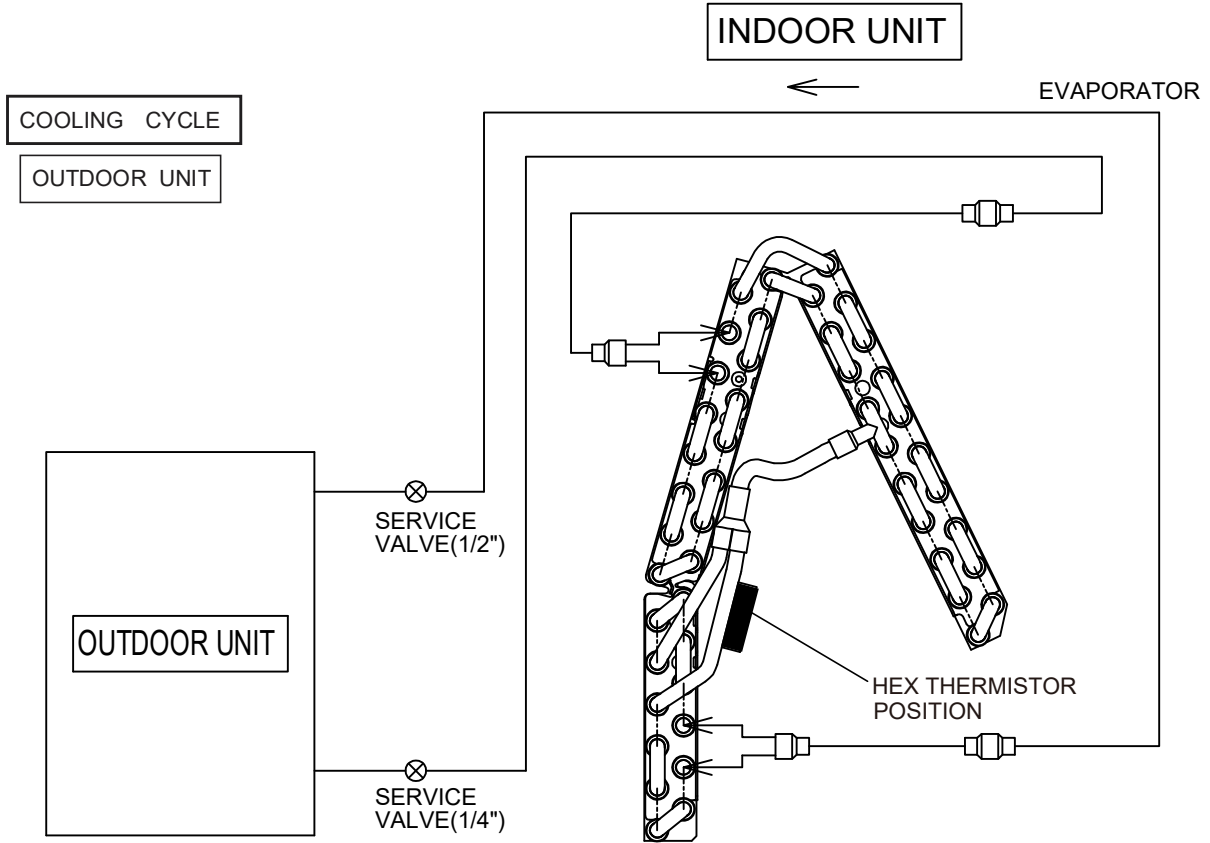
8.1.4. WALL TYPE: RAK-GJ18QHAA



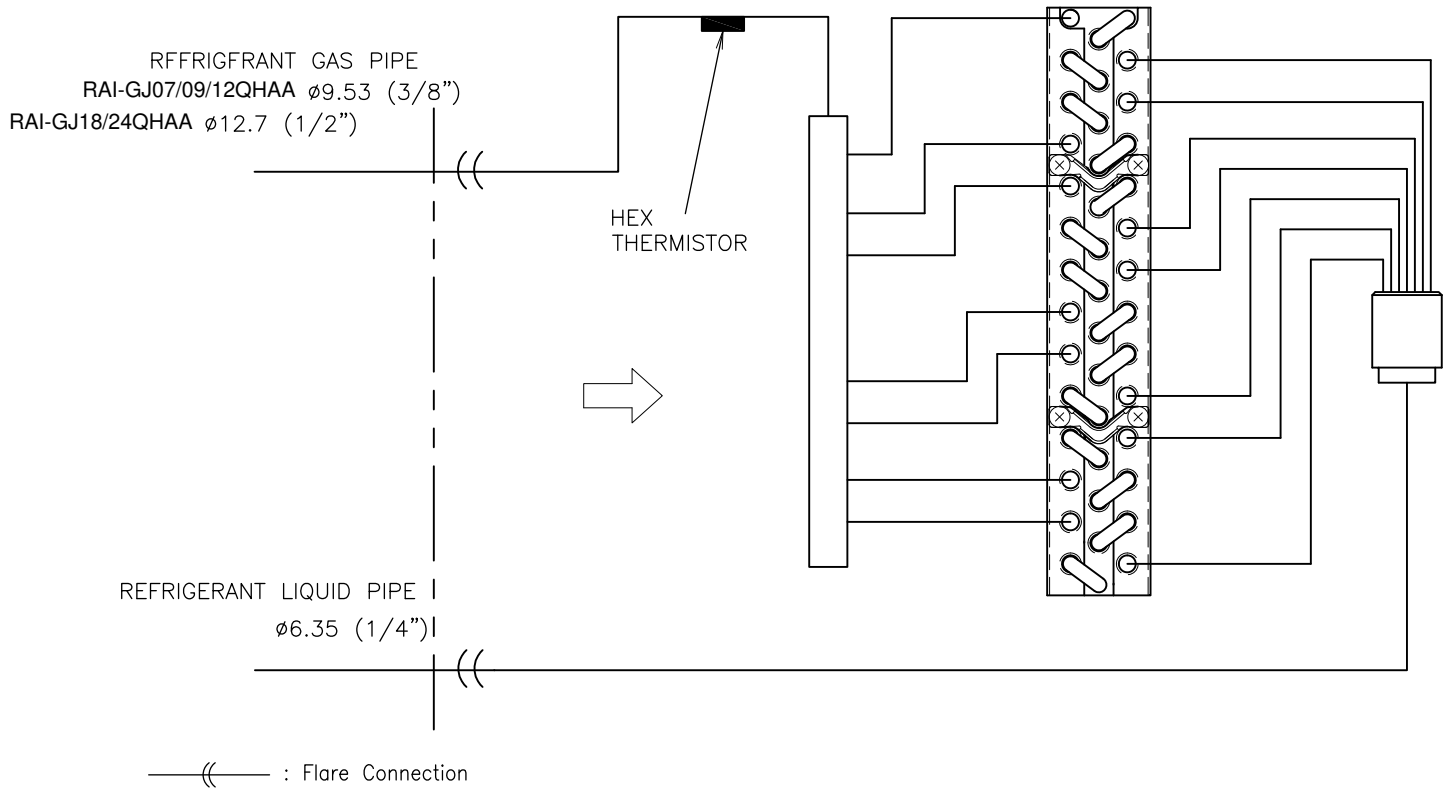
8.1.5. FLOOR TYPE: RAF-FJ07QHAA, RAF-FJ09QHAA, RAF-FJ12QHAA



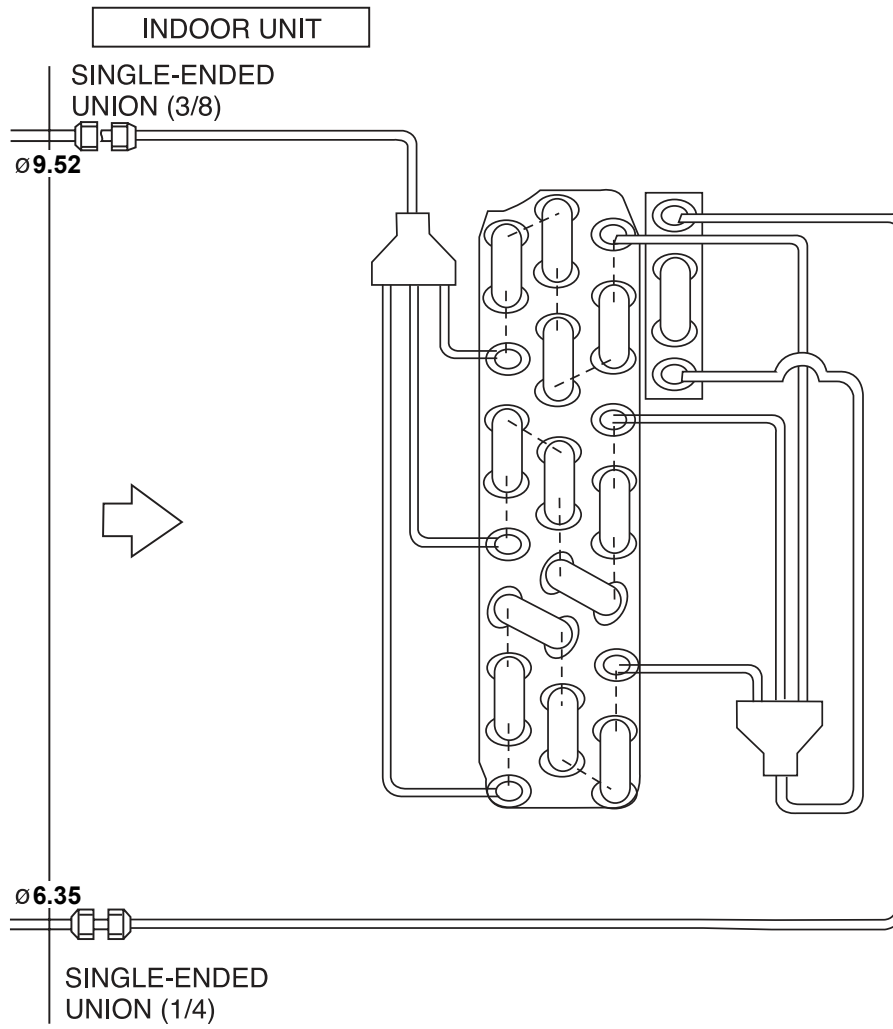
8.1.6. FLOOR TYPE: RAF-FJ18QHAA



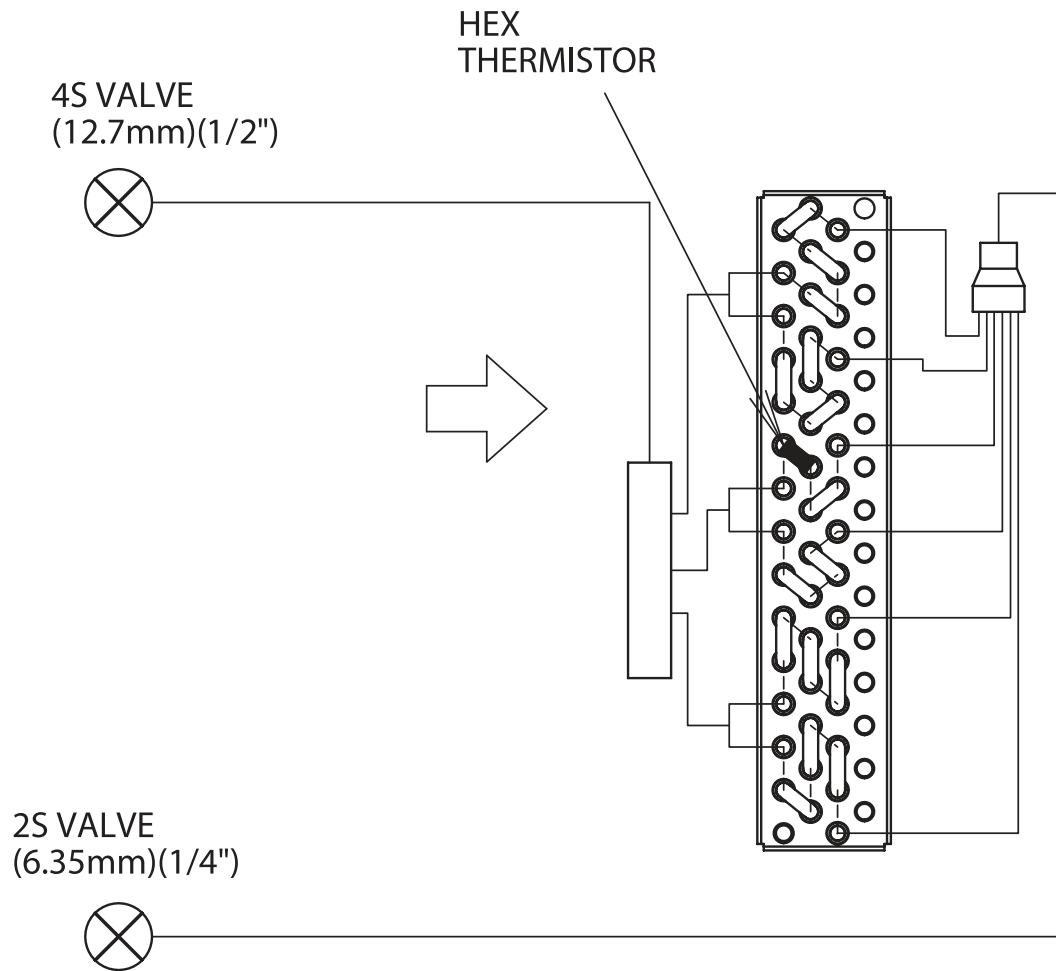
8.1.7. CEILING CASSETTE: RAI-GJ07QHAA, RAI-GJ09QHAA,RAI-GJ12QHAA, RAI-GJ18QHAA,RAI-GJ24QHAA



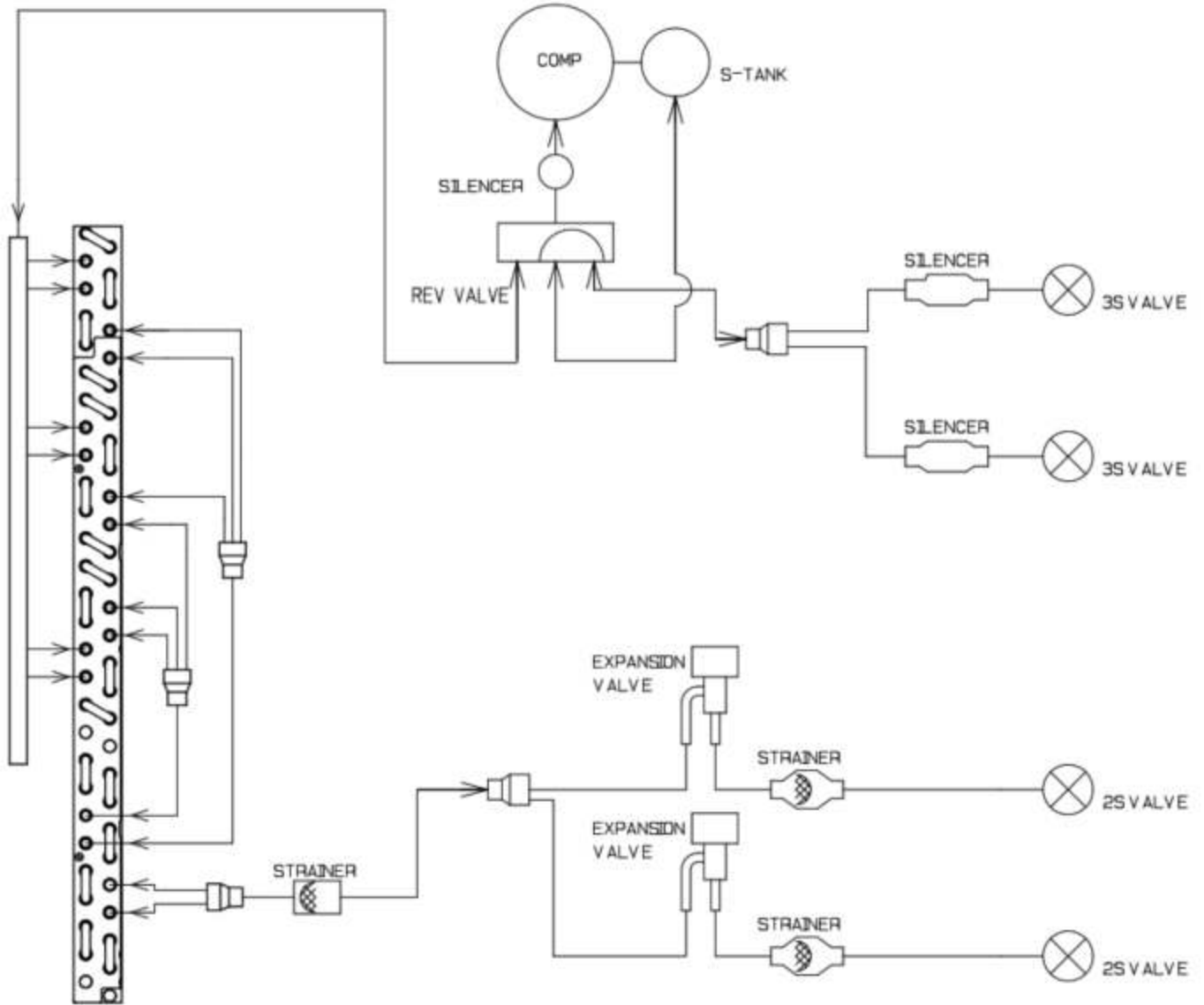
8.1.8. DUCT TYPE: RAD-GJ07QHAA, RAD-GJ09QHAA, RAD-GJ12QHAA



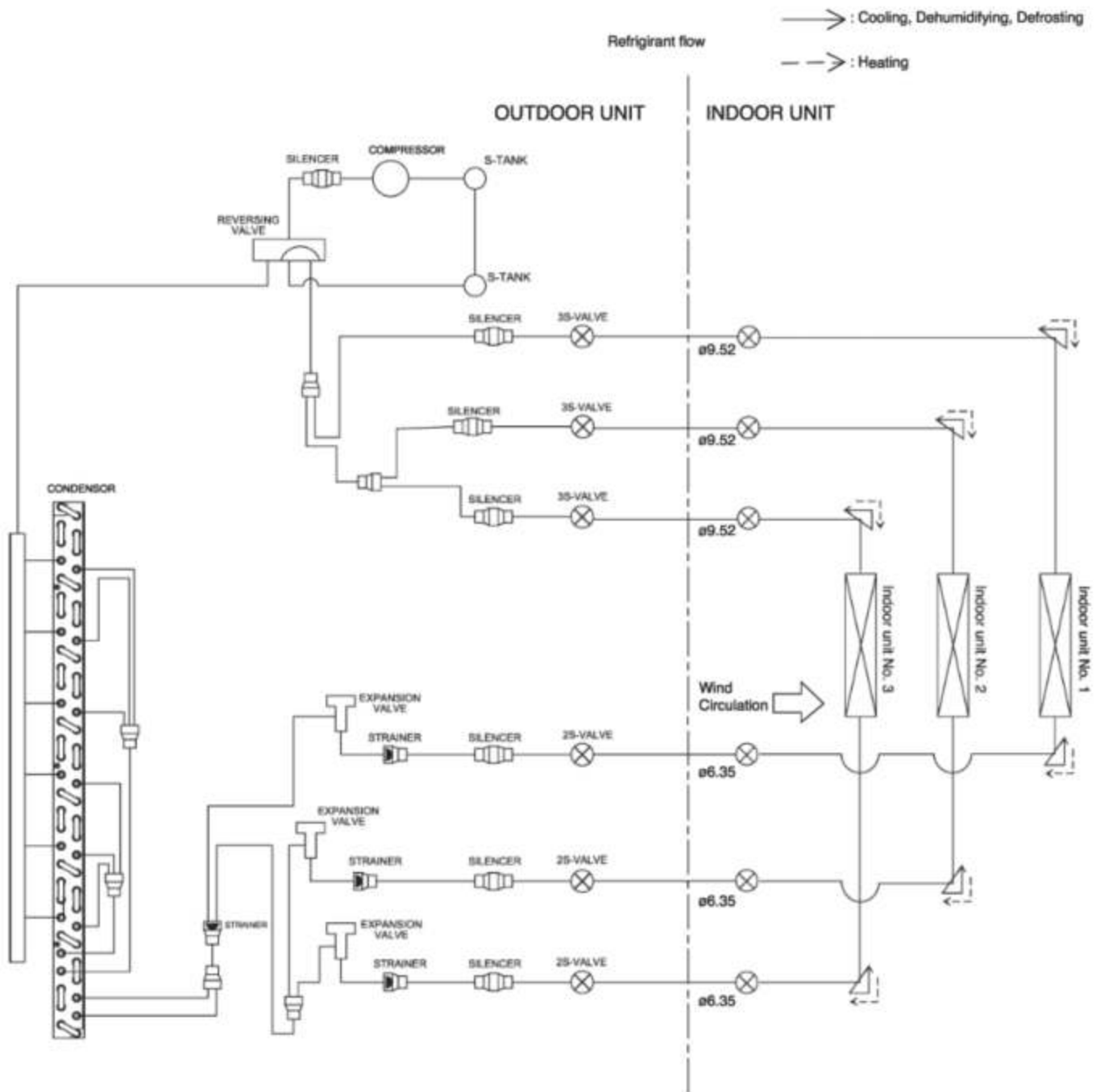
8.1.9. DUCT TYPE: RAD-GJ18QHAA , RAD-GJ24QHAA



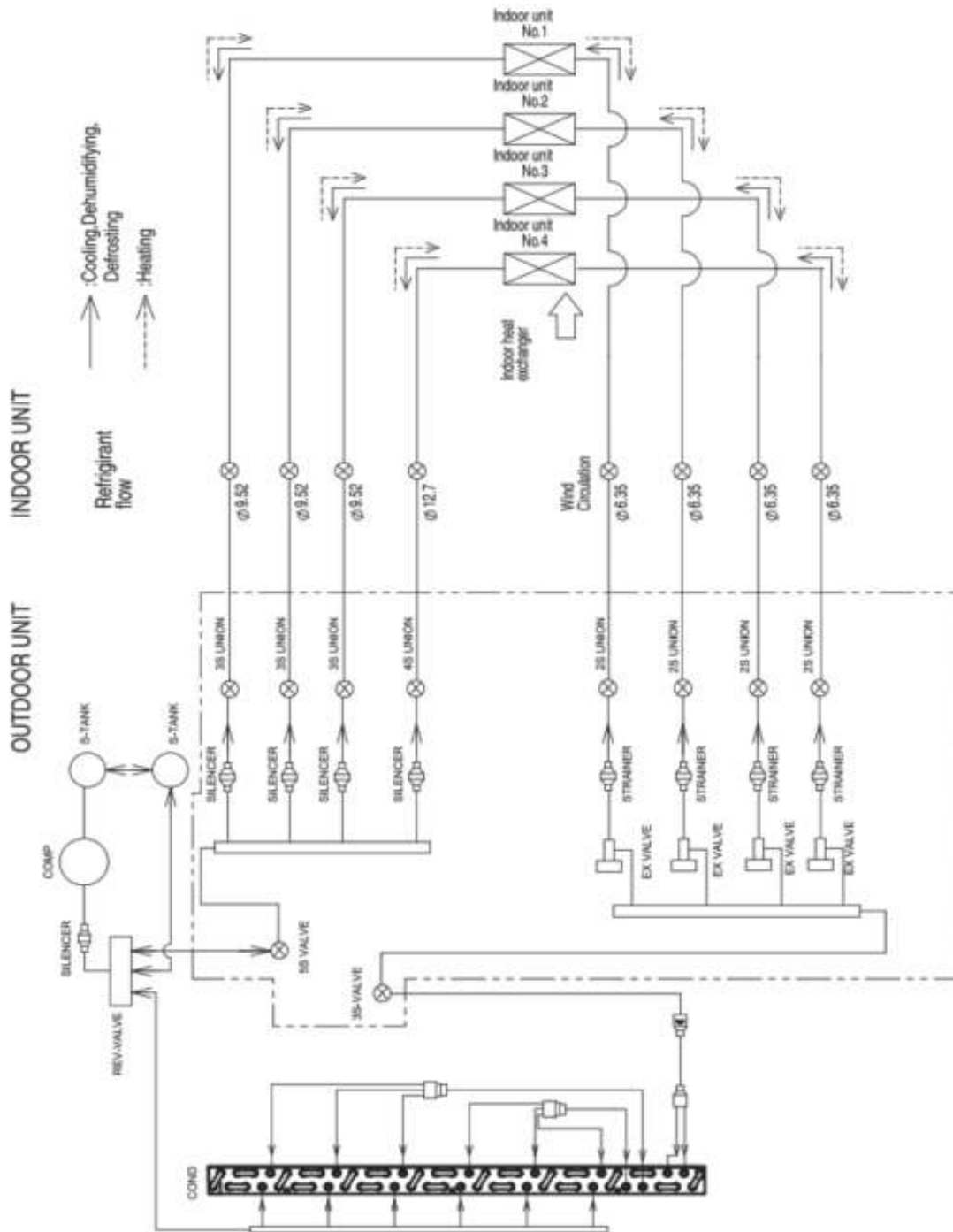
8.2 2 ROOMS MULTIZONE: RAM-G18N2HAA



8.3 3 ROOMS MULTIZONE: RAM-G24N3HAA



8.4 4 ROOMS MULTIZONE: RAM-G36N4HAA

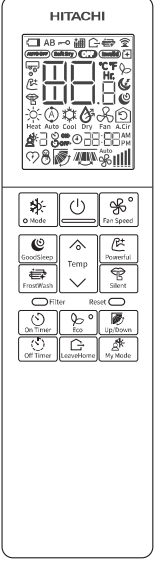
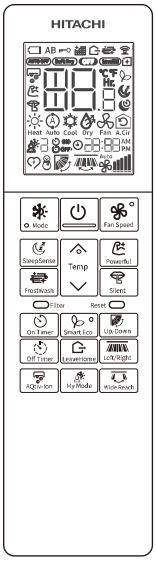
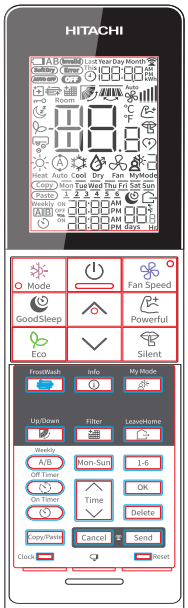

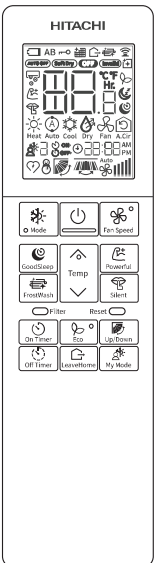
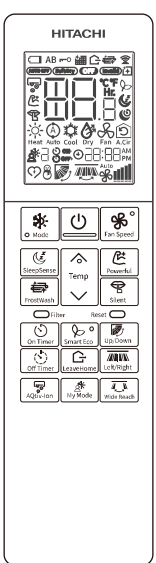


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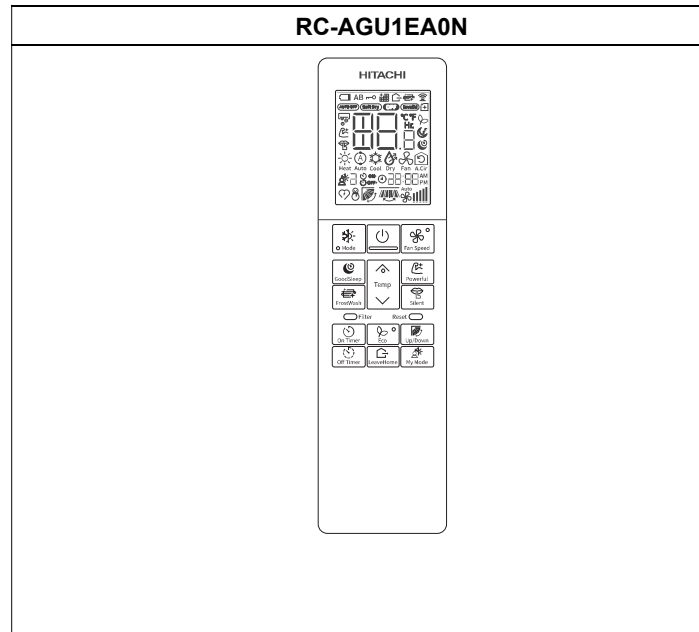
9.1 WIRELESS REMOTE CONTROL FUNCTION




















9.1.1.RC-AGU1EA0N, RC-AGS1EA0N, RC-BGH1FB0N, RC-BGH1FD0N

RC-AGU1EA0N	RC-AGS1EA0N	RC-BGH1FB0N	RC-BGH1FD0N	RC-AGU1EA0N	RC-AGS1EA0N
					
STANDARD	STANDARD	STANDARD	Optional	Optional	Optional
RAK-DJ07QHAA RAK-DJ09RHAA RAK-DJ12RHAA RAK-DJ18RHAA RAK-DJ24RHAA	RAK-GJ07QHAA RAK-GJ09QHAA RAK-GJ12QHAA RAK-GJ18QHAA RAK-GJ24QHAA	RAF-FJ07QHAA RAF-FJ09QHAA RAF-FJ012QHAA RAF-FJ018QHAA	RAF-FJ07QHAA RAF-FJ09QHAA RAF-FJ012QHAA RAF-FJ018QHAA	RAD-GJ07QHAA RAD-GJ09QHAA RAD-GJ12QHAA RAD-GJ18QHAA RAD-GJ24QHAA	RAI-GJ07QHAA RAI-GJ09QHAA RAI-GJ12QHAA RAI-GJ18QHAA RAI-GJ24QHAA

9 CONTROL AND FUNCTION

9.1. RC-AGU1EA0N



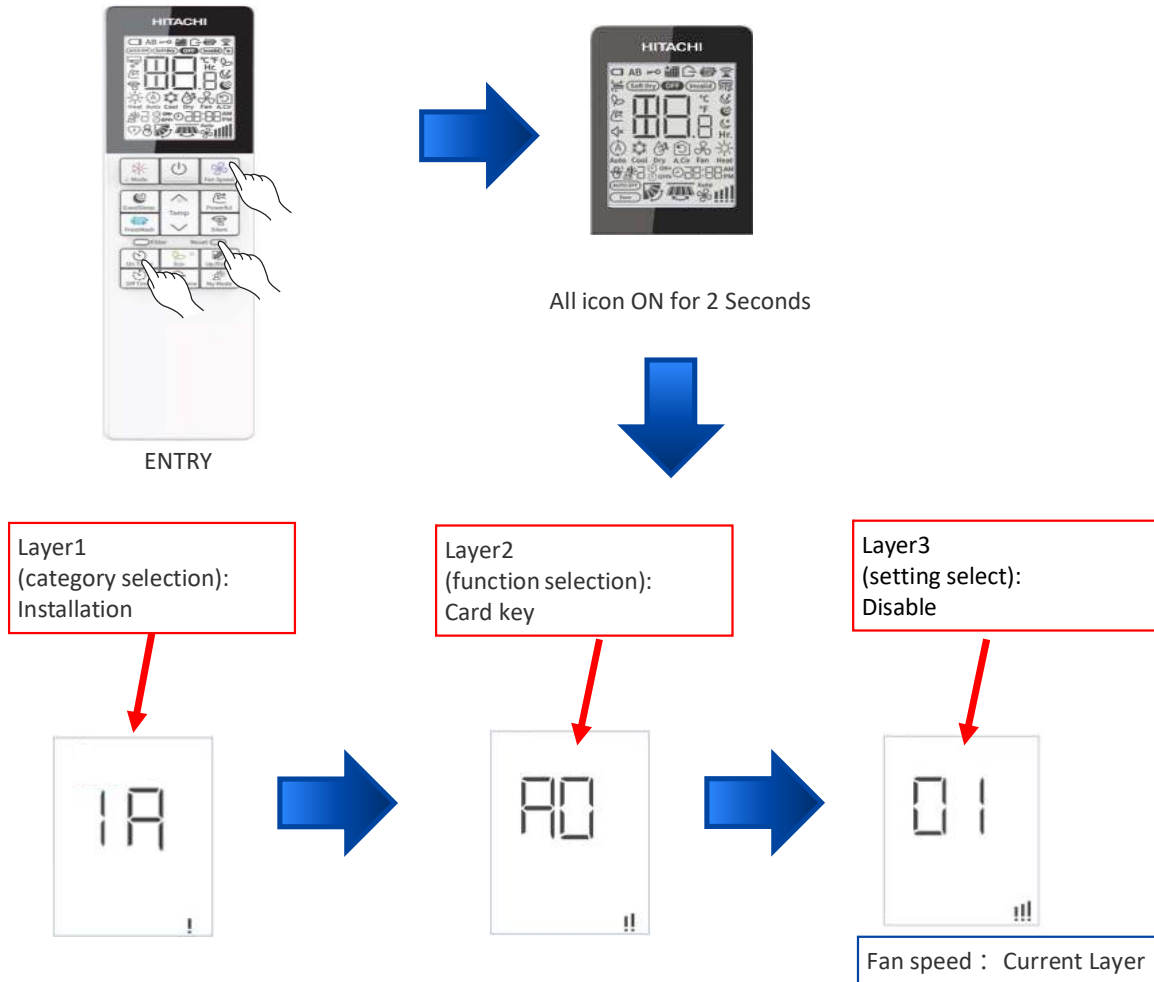
BUTTONS	FUNCTION
	<p>Mode Selector Button Use this button to select the operation mode. Every time you press this button the mode will change from  (Heat) →  (Auto) →  (Cool) →  (Dry) →  (Fan) cyclically.</p>
	<p>GoodSleep Button the unit shifts the room temperature and reduces the fan speed.</p>
	<p>Temperature Button Room temperature setting. Value will change quicker when keep pressing.</p>
	<p>FrostWash Button The dust and dirt adhering to indoor heat exchanger which is the cause of the smell.</p>
	<p>Fan Speed Button Select the fan speed.</p>
	<p>On/Off Button Press this button to start operation. Press it again to stop operation.</p>
	<p>Powerful Button The air conditioner performs at maximum power.</p>
	<p>Silent Button The fan speed changes to the silent fan speed</p>
	<p>On Timer Button Select the turn ON time.</p>
	<p>Off Timer Button Select the turn OFF time.</p>
	<p>Eco Button Use this button to set the Eco mode.</p>
	<p>LeaveHome Button Prevent the room temperature from falling too much by setting temperature 50°F ~ 60°F when no one is at home.</p>
	<p>Up/Down Button Control the angle of the horizontal air deflector.</p>
	<p>My Mode Button Use this mode for personalized comfortable settings. The My Mode can be set by using the remote controller. Up to 3 programs can be set.</p>

For more information, please refer to the operation manual.

9.2. How to set up from Service setting mode

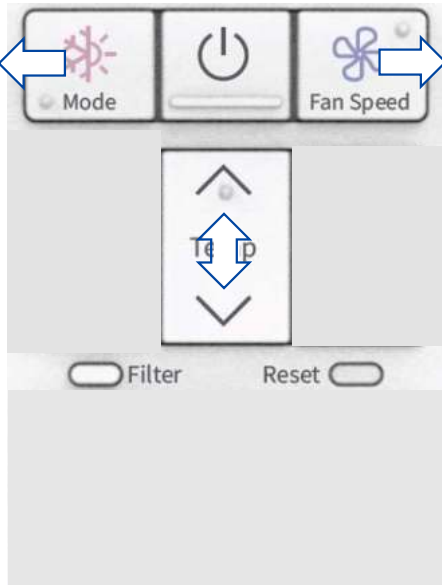
The Service function, which was set by DIP-SW setting or double pressing of the HHRC in the current model. it will be done by HHRC in GRAC as shown as below.

[On timer] + [Fan speed] + [Reset]
(Press three Key for 5 seconds to avoid access by User)



※ If you don't do anything for 30 seconds, you will be out of the service setting mode.

9.3. How to operate the HHRC method

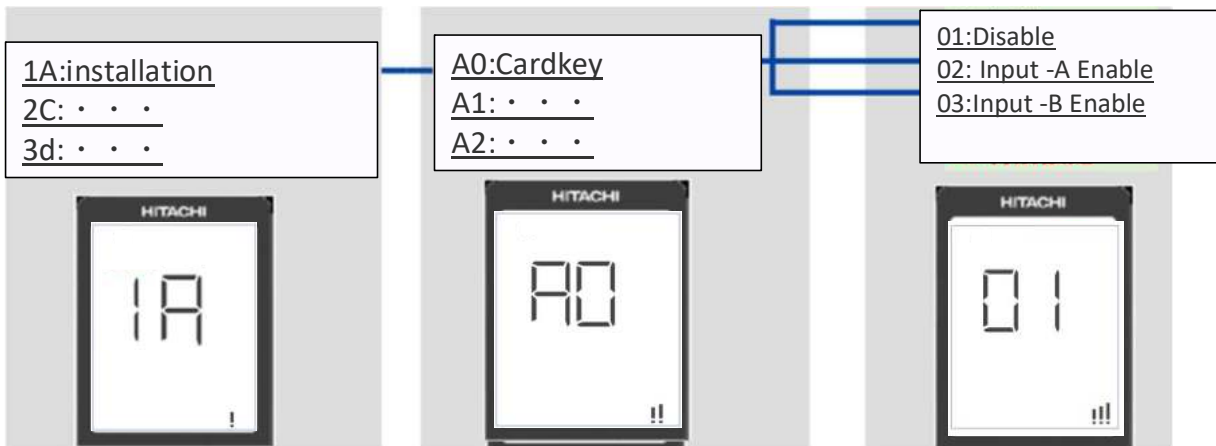


Temp Δ ∇ : Selection (in the same layer)
 Mode : move to previous layer
 Fan Speed : Move to next layer
 ON/OFF : Decision/Send (at layer 3)
 : Current setting check(at layer 2)
 Filter: category initialization(at layer 1)
 Filter + ON/OFF: all category initialization(at layer 1)
 ※ To exit from this setting mode, you need to either not operate the HHRC panel for 30 seconds or press and hold the UP/Down key for 5 seconds.

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Setting select)



The Adjust filter sign Time can be changed by the remote controller.
 (This procedure shall be implemented strictly by service personnel only.)
 It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display		
			Layer1 Category	Layer2 Function	Layer3 Value
Clean	Time for filter sign display	filter lamp lighting time:Adjustment -1(100h)	2C	C1	01
		filter lamp lighting time:Adjustment ±0(200h)			02
		filter lamp lighting time:Adjustment ±1(300h)			03
		filter lamp lighting time:Adjustment ±2(400h)			04
		reserve			05-99

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Select settings)

1A: . . .	CO: Outdoor Frost wash	01:
2C: . . .	C1: Time for filter sign display	02:
3d: . . .	C2: IDU auto FrostWash period adjustment	03:
		04:



ON/OFF key at Layer 3
with showing "02" on LCD

【IDU response】
 Buzzer sound: "pi"
 Timer LED: lit for 3s(only for "1A" category)
 Louver etc.: initializing operation

【note】
 If receiving the order of "05"- "99", IDU
 buzzer sounds as "pipi-"(rejecting sound).

9.4. Service setting item used for GRAC Entry

Category	Function	Display on LCD Temperature 7 segment Layer Wise			Value setting meaning at Layer-3
		1	2	3	
Installation	Card Key	1A	A0	01	1 - Card Key Input - Disable
				02	2 - Contact A Enable
				03	3 - Contact B Enable
	Heating/Cooling only mode select - (Operation Mode Lock)	1A	A1	04-99	4-99 : Reserved
				01	1 - Normal Mode
				02	2 -Cooling Lock (Cool,Dry,A.circulator,Fan mode available)
				03	3 - Heating Lock (Heat and Fan mode available)
				04-99	4-99 : Reserved
				01	auto restart changeover disable
Auto restart switchover(Standard)	1A	A2	02	auto restart by previous mode	
			03-99	3-99 : Reserved	
			01	filter lamp lighting time:Adjustment -1 (100hours)	
Clean	Time for filter sign display	2C	C1	02	filter lamp lighting time:Adjustment ±0 (200hours)
				03	filter lamp lighting time:Adjustment +1 (300hours)
				04	filter lamp lighting time:Adjustment +2 (400hours)
				05-99	Reserved
Cycle Operation adjustment	Defrost selection Function	3d	E0	01	01 - Standard Region
				02	02- Cold Region
				03-99	Reserved
	Set temperature shift adjustment (Cooling)	3d	E1	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
	12-99	Reserved			
	Set temperature shift adjustment (Heating)	3d	E2	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
	12-99	Reserved			
Indoor fan air speed when cooling thermostat is off	3d	E3	01	01 : standard	
			02	02 : Cold Region	
			03-99	Reserved	
Selection of indoor fan control during heating thermo-off	3d	E4	01	01 : Fan Control at the Time of Heating Thermo- Off "Pattern 1"	
			02	02 : Fan Control at the Time of Heating Thermo- Off "Pattern 2"	
			03	03 : Fan Control at the Time of Heating Thermo- Off "Pattern 3"	
				d	
supporting service	Wi-Fi forced reset count	5F	L1	01	4(Number of forced resets)
				02	8(Number of forced resets)
				03	12(Number of forced resets)
				04-99	Reserved

9.4. Service setting item used for GRAC Entry

HHRC	Temperature Resolution change - 0.5°C--> 1°C	6H	P0	01	1 -0.5 °C Resolution 2-1 °C Resolution			
	Fan Speed key sequence (Weaker to stronger , stronger to Weaker)	6H	P1	01	1 - Default (Auto-Silent-Low-Med-Hi-Hi2) 2- Reverse (Hi2-Hi-Med-Lo-Silent-Auto)			
	Operation Mode : Auto	6H	P2	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key			
	Operation Mode : Cool	6H	P3	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key			
	Operation Mode : Dry	6H	P4	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key			
	Operation Mode : Fan	6H	P5	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key			
	Operation Mode : Heat	6H	P6	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key			
	Auto Fan speed : Enable / Disable	6H	P8	02	1 -Disable Selection on HHRC by Fan key 2 - Enable Selection on HHRC by Fan Key			
	Fan Speed tapping control	6H	P9	01	1- Normal (Auto, Silent, Low, Med, Hi, H2) Selection on HHRC by Fan key 2- (Auto, Silent, Lo, Med, Hi) Selection on HHRC by Fan key			
	Cooling Lower limit setting	6H	PC	16	Lower set temp. start from 60°F)			
17				Lower set temp. start from 63°F)				
18				Lower set temp. start from 64°F)				
19				Lower set temp. start from 66°F)				
20				Lower set temp. start from 68°F)				
21				Lower set temp. start from 70°F)				
22				Lower set temp. start from 72°F)				
23				Lower set temp. start from 73°F)				
24				Lower set temp. start from 76°F)				
25				Lower set temp. start from 77°F)				
26				Lower set temp. start from 79°F)				
27				Lower set temp. start from 80°F)				
28				Lower set temp. start from 83°F)				
29				Lower set temp. start from 84°F)				
30				Lower set temp. start from 86°F)				
31				Lower set temp. start from 88°F)				
32				Lower set temp. start from 90°F)				
Heating Upper limit setting				6H	Pd	32	Upper set temp. start from 90°F)	
						31	Upper set temp. start from 88°F)	
						30	Upper set temp. start from 86°F)	
	29	Upper set temp. start from 84°F)						
	28	Upper set temp. start from 83°F)						
	27	Upper set temp. start from 80°F)						
	26	Upper set temp. start from 79°F)						
	25	Upper set temp. start from 77°F)						
	24	Upper set temp. start from 76°F)						
	23	Upper set temp. start from 73°F)						
			22	Upper set temp. start from 72°F)				
			21	Upper set temp. start from 70°F)				
			20	Upper set temp. start from 68°F)				
			19	Upper set temp. start from 66°F)				
			18	Upper set temp. start from 64°F)				
			17	Upper set temp. start from 63°F)				
			16	Upper set temp. start from 60°F)				
			Diagnosis	Failure Indication(latest to last 5 times)	7J	t0	01	1: Failure Display History 1 (Latest of last Five)
							02	2: Failure Display History 2
							03	3: Failure Display History 3
04	4: Failure Display History 4							
05	5: Failure Display History 5 (5 th Error)							
06-99	Reserved							
display ODU Self check (Failure Diagnosis Start)	7J	t1		01	1 : Failure Diagnosis Start			
				02-99	Reserved			
Failure Memory Erase	7J	t2		01	1:Failure Memory Erase			
				02-99	Reserved			
Humidity Sensor failure diagnosis	7J	t3		01	1:Humidity ensor failure diagnosis request			
				02-99	Reserved			

9.5. Buzzer sounding for showing error contents

【Purpose】

Reduction of “mis-communication about error contents” at contacting the service call center.

【Function】

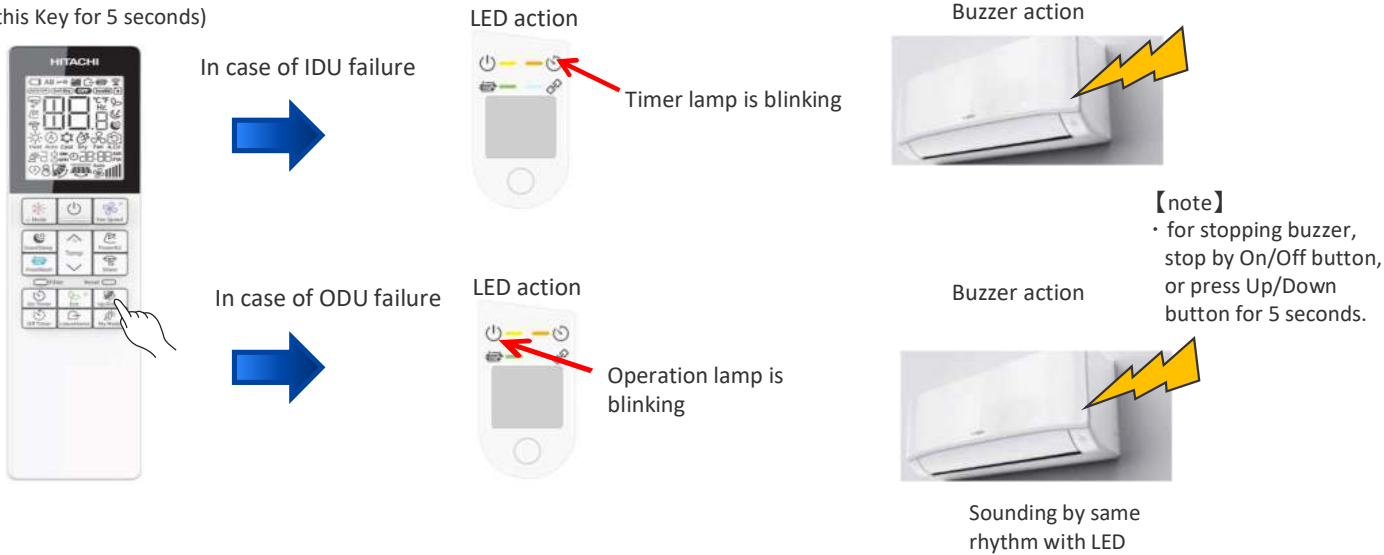
Add buzzer sounding for showing error contents during error, in addition to IDU LED action .

【How to use】

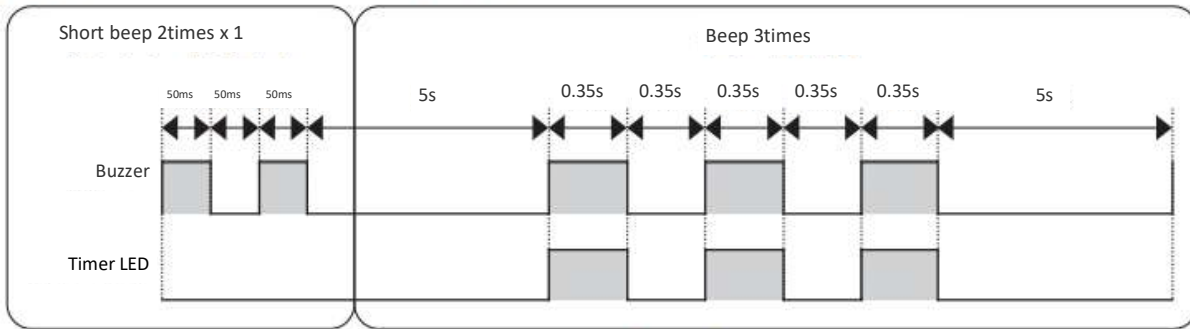
When IDU or ODU has failed, and the Timer lamp is blinking. Service engineer can know error contents from the buzzer through phone.

[Up/Down]

(Press this Key for 5 seconds)

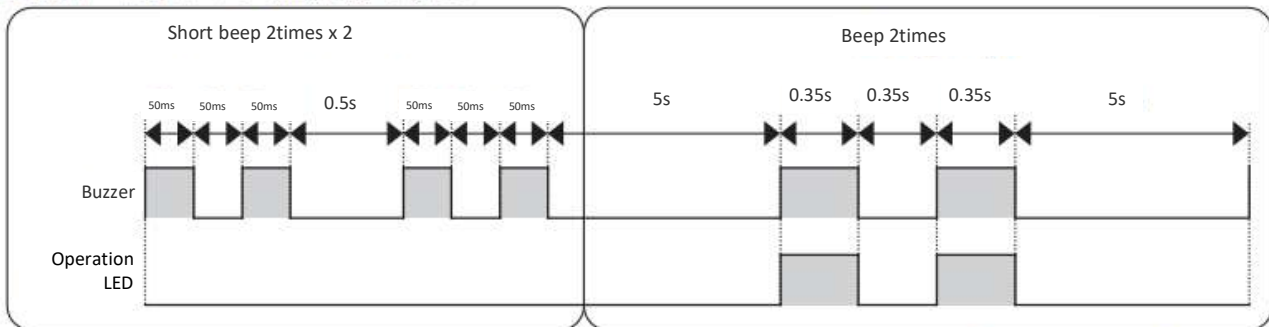


<IDU error example: timer LED will blink 3 times(interface defective(IDU) >



After “Short 2times x 1 beep”, “3 times beep” will be repeated.

<ODU error example: operation LED will blink 2 times(peak current cut) >



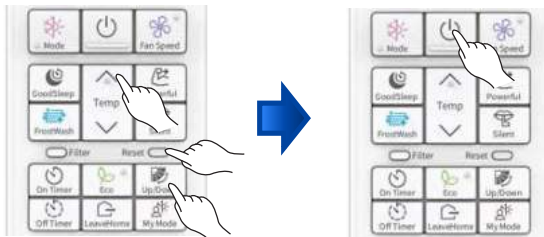
After “Short 2times x 2 beep”, “2 times beep” will be repeated.

9.6. OTHER SETTING

▪ ID SELECTION


1. Press “Up/Down swing button” and “set. Temp. up button” and “reset button”, and release “reset button”.
2. Select from A or B by pressing “set.temp. button”.
3. Press “On/Off button” toward IDU.

(EEPROM in HHRC will keep the A or B information.)

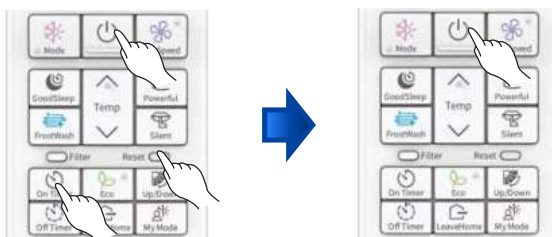


▪ DISPLAY MODE

For operating indoor unit independently (without outdoor unit connection), remote controller has to be set according to below procedures before send the signal to the indoor unit. New communication format between indoor and outdoor is required to communicate with outdoor unit.

1. Press and holding “On Times button” and “On/Off button”, press “reset button” on the same time.
2. Release “reset button” only and make sure that the FAN speed icon  on LCD display.
3. Press “On/Off button” toward IDU.

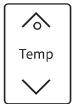
Then, the indoor unit will start to operate independently according to the selected operation mode.


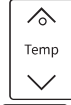




9.7. ERROR CODE INFORMATION

9.7.1. HOW TO DISPLAY ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t0” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.

5. Press “” (On/Off) button of the remote control, the fault information will be seen.

Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
Display self-diagnosis memory(※)	Display History 1 (Latest(newest) of last Five)	7J	t0	01
	Display History 2			02
	Display History 3			03
	Display History 4			04
	Display History 5			05


The specific information of error code is shown in the table below:



	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
INDOOR	-	-	000 00	Normal
	1 time	-	001 00	Refrigerant cycle fault
	2 times	-	-	Outdoor unit is under forced operation
	3 times	9 times	003 00	Communication error (indoor)
	9 times	-	009 00	Indoor thermistor defective
	10 times	-	003 00	Abnormal rotating numbers of DC fan motor
	12 times	9 times	012 00	Communication error (outdoor)
	13 times	-	013 00	EEPROM data reading error
	20 times	-	020 00	Human sensor defective
	21 times	-	021 00	Interface defective (other machine cause)
	25 times	-	025 00	CN7A/B connection defective


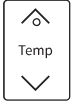
	OPERATION LAMP BLINKING	CODE	MEANING (THE FOLLOW DEFECTIVES IN OUTDOOR UNIT)
INDOOR	2 times	002 01	Peak current cut
	3 times	003 01	Compressor abnormal low speed rotation
	4 times	004 01	Compressor switching failure
	5 times	005 01	Overload lower limit cut
	6 times	006 01	OH thermistor temperature rise
	7 times	007 01	Abnormal outdoor thermistor
	9 times	009 01	Communication error
	10 times	010 01	Abnormal power source
	11 times	011 01	Fan stop for strong wind
	12 times	012 01	Fan motor fault
	13 times	013 01	EEPROM reading error
	14 times	014 01	DC Voltage abnormal
	15 times	015 01	Abnormal PWB circuit
	16 times	016 01	High load stop

9.7.2. HOW TO REMOVE ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t2” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.

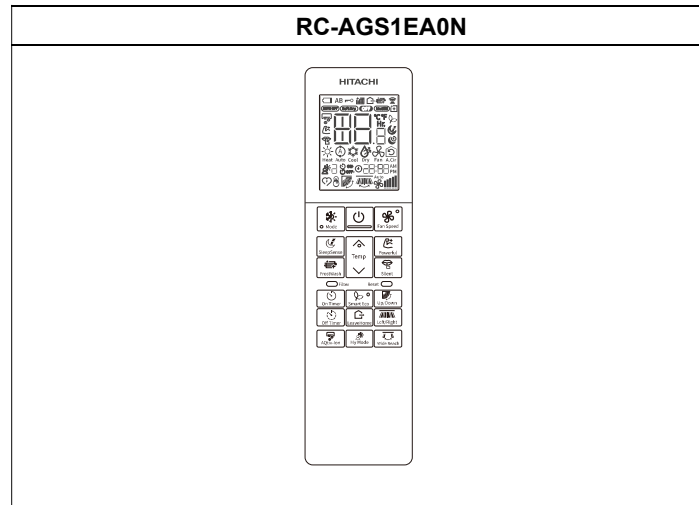
5. Press “” (On/Off) button of the remote control, and the error code will be removed.























10 CONTROL AND FUNCTION**CONTENTS**

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10 CONTROL AND FUNCTION

10.1. RC-AGS1EA0N

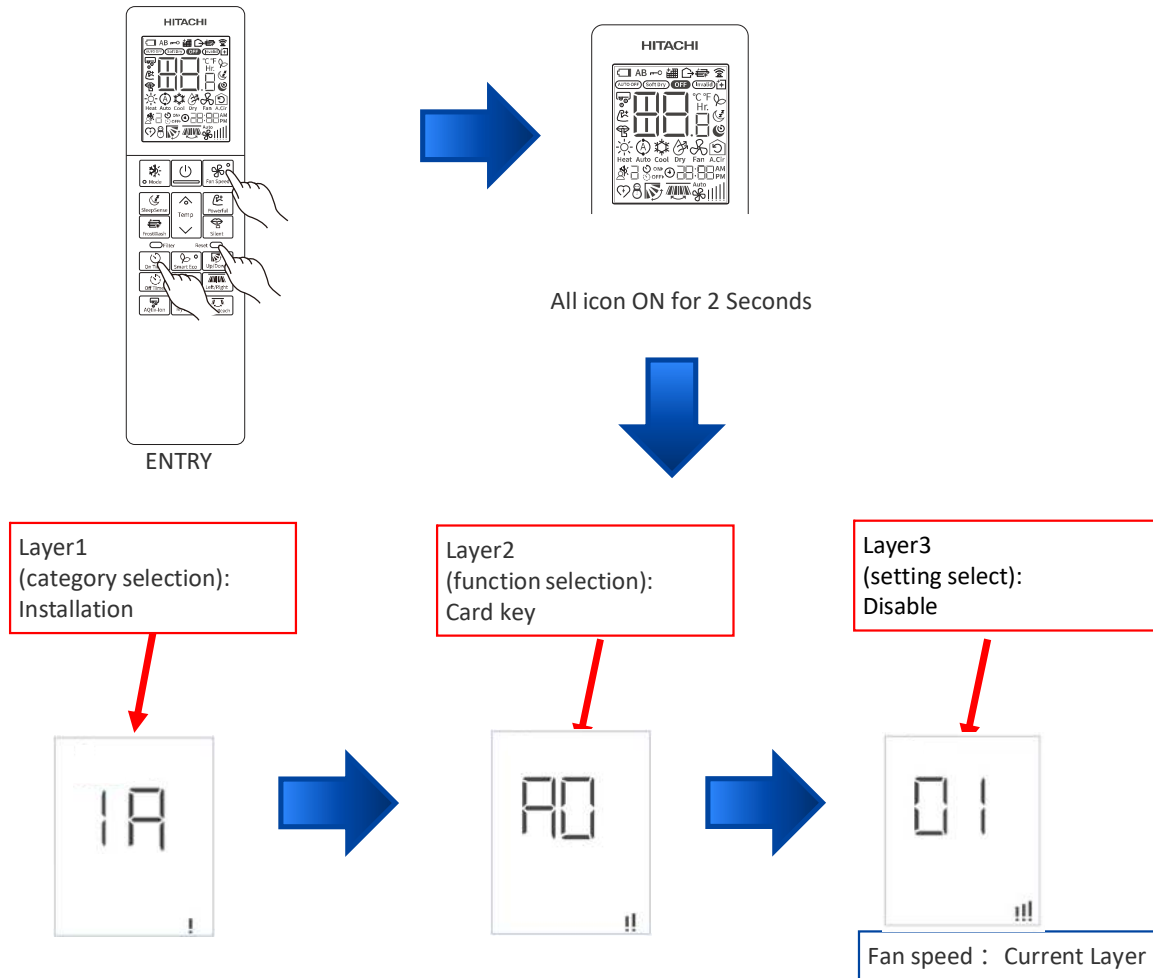


BUTTONS	FUNCTION
	<p>Mode Selector Button Use this button to select the operation mode. Every time you press this button the mode will change from  (Heat) →  (Auto) →  (Cool) →  (Dry) →  (Fan) cyclically.</p>
	<p>SleepSense Button Control set temperature and fan speed.</p>
	<p>Temperature Button Room temperature setting. Value will change quicker when keep pressing.</p>
	<p>FrostWash Button The dust and dirt adhering to indoor heat exchanger which is the cause of the smell.</p>
	<p>Fan Speed Button Select the fan speed.</p>
	<p>On/Off Button Press this button to start operation. Press it again to stop operation.</p>
	<p>Powerful Button The air conditioner performs at maximum power.</p>
	<p>Silent Button The fan speed changes to the silent fan speed</p>
	<p>On Timer Button Select the turn ON time.</p>
	<p>Off Timer Button Select the turn OFF time.</p>
	<p>Smart Eco Button Use this button to set the Smart Eco mode.</p>
	<p>LeaveHome Button Prevent the room temperature from falling too much by setting temperature 50°F~60°F when no one is at home.</p>
	<p>Up/Down Button Control the angle of the horizontal air deflector.</p>
	<p>My Mode Button Use this mode for personalized comfortable settings. The My Mode can be set by using the remote controller. Up to 3 programs can be set.</p>
	<p>Left/Right Button Control the angle of the Vertical air deflector.</p>
	<p>Wide Reach Button Control the angle of the Vertical air deflector.</p>
	<p>AQtiV-Ion Button</p>

10.2. How to set up from Service setting mode

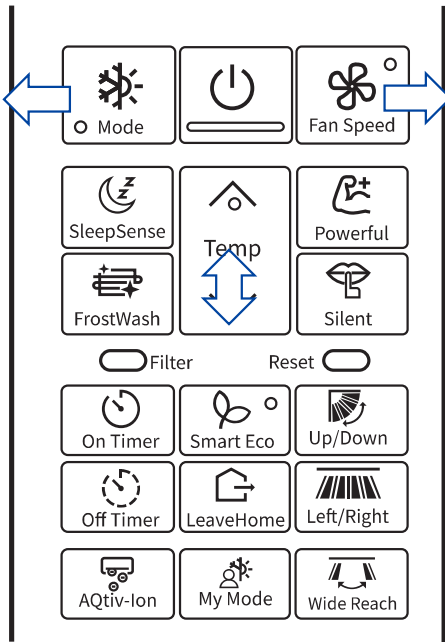
The Service function, which was set by DIP-SW setting or double pressing of the HHRC in the current model. it will be done by HHRC in GRAC as shown as below.

[On timer] + [Fan speed] + [Reset]
 (Press three Key for 5 seconds to avoid access by User)



※ If you don't do anything for 30 seconds, you will be out of the service setting mode.

10.3. How to operate the HHRC method

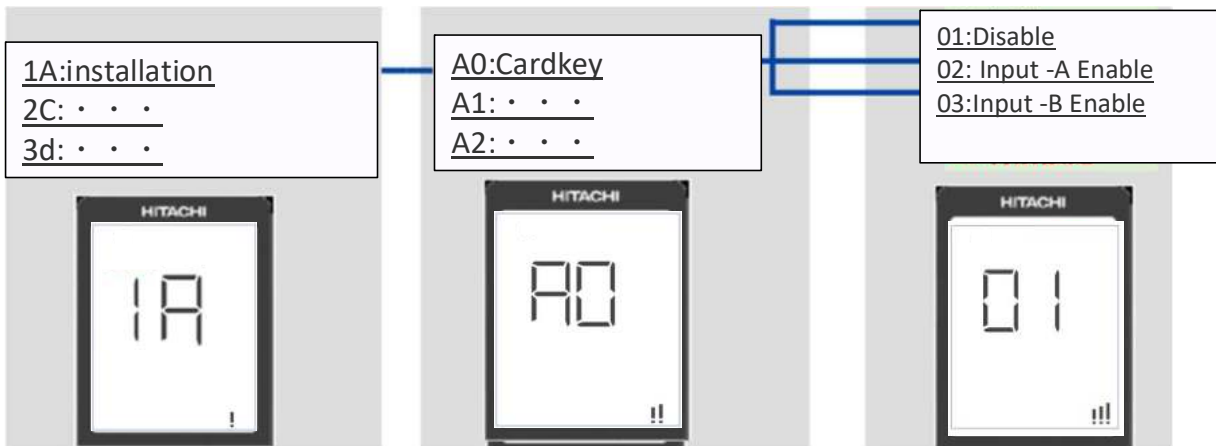


Temp Δ ∇ : Selection (in the same layer)
 Mode : move to previous layer
 Fan Speed : Move to next layer
 ON/OFF : Decision/Send (at layer 3)
 : Current setting check(at layer 2)
 Filter: category initialization(at layer 1)
 Filter + ON/OFF: all category initialization(at layer 1)
 ※ To exit from this setting mode, you need to either not operate the HHRC panel for 30 seconds or press and hold the UP/Down key for 5 seconds.

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Setting select)



The Adjust filter sign Time can be changed by the remote controller.
 (This procedure shall be implemented strictly by service personnel only.)
 It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display		
			Layer1 Category	Layer2 Function	Layer3 Value
Clean	Time for filter sign display	filter lamp lighting time:Adjustment -1(100h)	2C	C1	01
		filter lamp lighting time:Adjustment ±0(200h)			02
		filter lamp lighting time:Adjustment ±1(300h)			03
		filter lamp lighting time:Adjustment ±2(400h)			04
		reserve	05-99		

Layer 1 (category selection) Layer 2 (Function selection) Layer 3 (Select settings)

1A: - - -	C0: Outdoor Frost wash	01:
2C: . . .	C1: Time for filter sign display	02:
3d: - - -	C2: IDU auto FrostWash period adjustment	03:
		04:



【IDU response】
 Buzzer sound: "pi"
 Timer LED: lit for 3s(only for "1A" category)
 Louver etc.: initializing operation

【note】
 If receiving the order of "05"- "99", IDU buzzer sounds as "pipi-"(rejecting sound).

10.4. Service setting item used for GRAC Standard (Wireless remote model: RC-AGS1EA0N)

Category	Function	Display on LCD Temperature 7 segment Layer Wise			Value setting meaning at Layer-3
		1	2	3	
Installation	Card Key	1A	A0	01	1 - Card Key Input - Disable
				02	2 - Contact A Enable
				03	3 - Contact B Enable
				04-99	4~99 : Reserved
	Heating/Cooling only mode select - (Operation Mode Lock)	1A	A1	01	1 - Normal Mode
				02	2 -Cooling Lock (Cool,Dry,A.circulator,Fan mode available)
				03	3 - Heating Lock (Heat and Fan mode available)
				04-99	4~99 : Reserved
	Auto restart switchover(Standard)	1A	A2	01	auto restart changeover disable
				02	auto restart by previous mode
				03-99	3~99 : Reserved
	Capacity limitation	1A	A6	01	Normal
02				low capacity	
03-99				(reserve)	
Cycle Operation	Defrost selection Function	3d	E0	01	01 - Standard Region
				02	02- Cold Region
				03-99	Reserved
	Set temperature shift adjustment (Cooling)	3d	E1	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
	Set temperature shift adjustment (Heating)	3d	E2	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
09				Setting Temperature Shift Adjustment (+3°C/6°F)	
10				Setting Temperature Shift Adjustment (+4°C/8°F)	
11				Setting Temperature Shift Adjustment (+5°C/10°F)	
Indoor fan air speed when cooling thermostat is off	3d	E3	01	01 : standard	
			02	02 : Cold Region	
			03-99	Reserved	
Selection of indoor fan control during heating thermo-off	3d	E4	01	01 : Fan Control at the Time of Heating Thermo- Off "Pattern 1"	
			02	02 : Fan Control at the Time of Heating Thermo- Off "Pattern 2"	
			03	03 : Fan Control at the Time of Heating Thermo- Off "Pattern 3"	
			04-99	Reserved	

HHRC	Temperature Resolution change - 0.5°C--> 1°C	6H	P0	01	1-0.5 °C Resolution 2-1 °C Resolution
	Fan Speed key sequence (Weaker to stronger ,	6H	P1	01	1 - Default (Auto-Silent-Low-Med-Hi-H2) 2- Reverse (Hi2-Hi-Med-Lo-Silent-Auto)
	Operation Mode : Auto	6H	P2	2	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Cool	6H	P3	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Dry	6H	P4	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Fan	6H	P5	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Heat	6H	P6	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Auto Fan speed : Enable / Disable	6H	P8	02	1-Disable Selection on HHRC by Fan key 2 - Enable Selection on HHRC by Fan Key
	Fan Speed tapping control	6H	P9	01	1- Normal (Auto,Silent, Low,Med,Hi,H2) Selection on HHRC by Fan key 2- (Auto,Silent,Lo,Med,Hi) Selection on HHRC by Fan key
	RTC and Timer setting Format change: 12 Hr Format / 24 HR Format (Only for RTC based models)	6H	PA	02	1 - 12 Hr Format with AM/PM for RTC and Timer ON, Timer OFF 2 - 24 Hr Format for RTC and Timer ON , Timer OFF
	Cooling Lower limit setting	6H	PC	16	Lower set temp. start from 60 °F)
				17	Lower set temp. start from 63 °F)
				18	Lower set temp. start from 64 °F)
				19	Lower set temp. start from 66 °F)
				20	Lower set temp. start from 68 °F)
				21	Lower set temp. start from 70 °F)
				22	Lower set temp. start from 72 °F)
				23	Lower set temp. start from 73 °F)
				24	Lower set temp. start from 76 °F)
				25	Lower set temp. start from 77 °F)
26				Lower set temp. start from 79 °F)	
27				Lower set temp. start from 80 °F)	
28				Lower set temp. start from 83 °F)	
29				Lower set temp. start from 84 °F)	
30				Lower set temp. start from 86 °F)	
Heating Upper limit setting				6H	Pd
	31	Upper set temp. start from 88 °F)			
	30	Upper set temp. start from 86 °F)			
	29	Upper set temp. start from 84 °F)			
	28	Upper set temp. start from 83 °F)			
	27	Upper set temp. start from 80 °F)			
	26	Upper set temp. start from 79 °F)			
	25	Upper set temp. start from 77 °F)			
	24	Upper set temp. start from 76 °F)			
	23	Upper set temp. start from 73 °F)			
	22	Upper set temp. start from 72 °F)			
	21	Upper set temp. start from 70 °F)			
	20	Upper set temp. start from 68 °F)			
	19	Upper set temp. start from 66 °F)			
	18	Upper set temp. start from 64 °F)			
	17	Upper set temp. start from 63 °F)			
16	Upper set temp. start from 60 °F)				
Diagnosis	Failure Indication(latest to last 5 times)	7J	t0	01	1: Failure Display History 1 (Latest of last Five)
				02	2: Failure Display History 2
				03	3: Failure Display History 3
				04	4: Failure Display History 4
				05	5: Failure Display History 5 (5 th Error)
				06-99	Reserved
	Failure Diagnosis Start	7J	t1	01	1 : Failure Diagnosis Start
				02-99	Reserved
	Failure Memory Erase	7J	t2	01	1:Failure Memory Erase
				02-99	Reserved
	Humidity Sensor failure diagnosis	7J	t3	01	1:Humidity ensor failure diagnosis request
				02-99	Reserved
Human Sensor failure diagnosis	7J	t4	01	1: failure diagnosis request	
			02-99	Reserved	

Clean	Time for filter sign display	2C	C1	01	filter lamp lighting time:Adjustment -1 (100hours)
				02	filter lamp lighting time:Adjustment ±0 (200hours)
				03	filter lamp lighting time:Adjustment +1 (300hours)
				04	filter lamp lighting time:Adjustment +2 (400hours)
				05-99	Reserved
	IDU auto FrostWash period adjustment	2C	C2	01	Cleaning time setting(normal case):Adjustment_NO 1 (2hours)
				02	Cleaning time setting(normal case):Adjustment_NO 2 (6hours)
				03	Cleaning time setting(normal case):Adjustment_NO 3 (10hours)
				04	Cleaning time setting(normal case):Adjustment_NO 4 (20hours)
				05	Cleaning time setting(normal case):Adjustment_NO 5 (42hours)
				06	Cleaning time setting(normal case):Adjustment_NO 6 (60hours)
				07	Cleaning time setting(normal case):Adjustment_NO 7 (84hours)
				08	Cleaning time setting(normal case):Adjustment_NO 8 (90hours)
				09	Cleaning time setting(normal case):Adjustment_NO 9 (100hours)
				10	Cleaning time setting(normal case):Adjustment_NO 10 (120hours)
				11	Cleaning time setting(normal case):Adjustment_NO 11 (140hours)
				12	Cleaning time setting(normal case):Adjustment_NO 12 (160hours)
				13	Cleaning time setting(normal case):Adjustment_NO 13 (180hours)
				14	Cleaning time setting(normal case):Adjustment_NO 14 (200hours)
15	Cleaning time setting(normal case):Adjustment_NO 15 (250hours)				
Supporting service category	Time for human sensor Auto off	5F	L3	01	Auto-off monitoring time: Adjustment- 3 (20min)
				02	Auto-off monitoring time: Adjustment- 2 (30min)
				03	Auto-off monitoring time: Adjustment- 1 (40min)
				04	Auto-off monitoring time: Adjustment± 0 (50min)
				05	Auto-off monitoring time: Adjustment+ 1 (60min)
				06	Auto-off monitoring time: Adjustment+ 2 (90min)
				07	Auto-off monitoring time: Adjustment+ 3 (120min)
				08-99	(Reserve)

10.5. Buzzer sounding for showing error contents

【Purpose】

Reduction of “mis-communication about error contents” at contacting the service call center.

【Function】

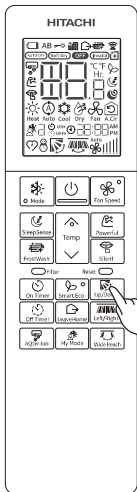
Add buzzer sounding for showing error contents during error, in addition to IDU LED action .

【How to use】

When IDU or ODU has failed, and the Timer lamp is blinking. Service engineer can know error contents from the buzzer through phone.

[Up/Down]

(Press this Key for 5 seconds)



In case of IDU failure



LED action



Timer lamp is blinking

Buzzer action



【note】

- for stopping buzzer, stop by On/Off button, or press Up/Down button for 5 seconds.

In case of ODU failure



LED action



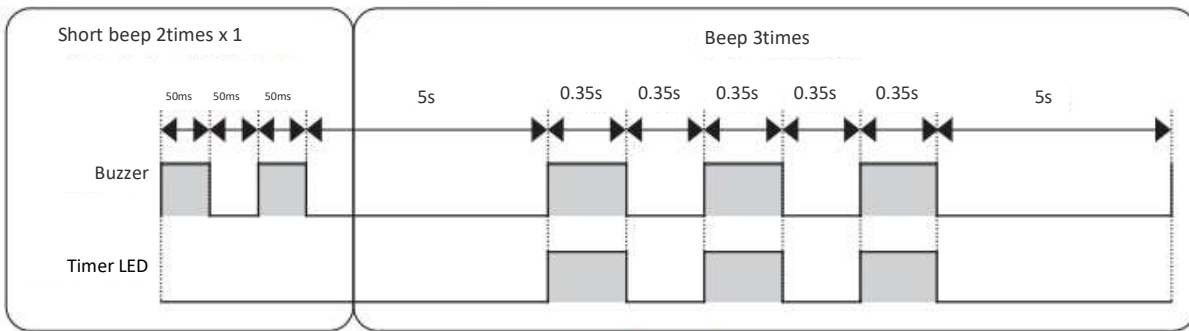
Operation lamp is blinking

Buzzer action



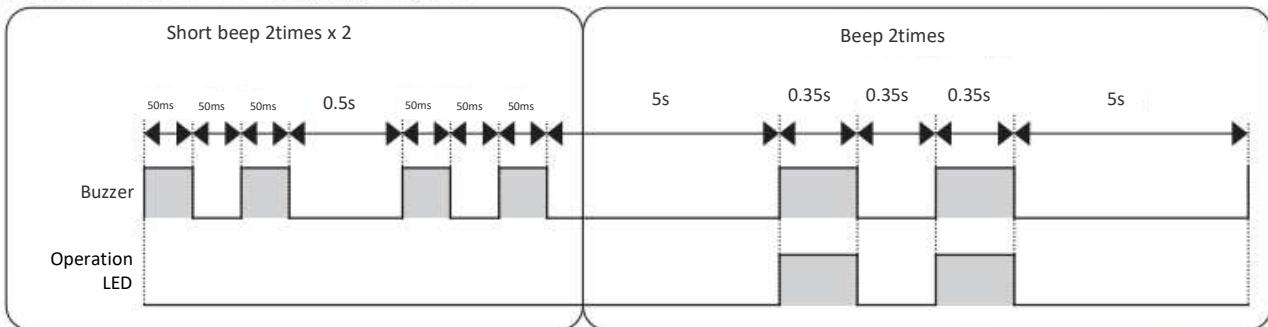
Sounding by same rhythm with LED

<IDU error example: timer LED will blink 3 times(interface defective(IDU) >



After “Short 2times x 1 beep”, “3 times beep” will be repeated.

<ODU error example: operation LED will blink 2 times(peak current cut) >



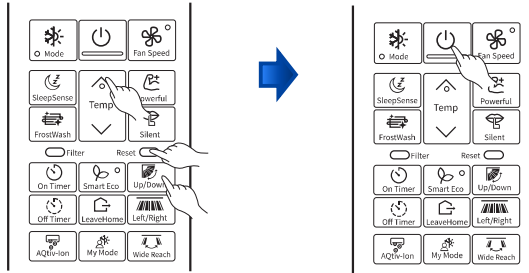
After “Short 2times x 2 beep”, “2 times beep” will be repeated.

10.6. OTHER SETTING

▪ ID SELECTION


1. Press “Up/Down swing button” and “set. Temp. up button” and “reset button”, and release “reset button”.
2. Select from A or B by pressing “set.temp. button”.
3. Press “On/Off button” toward IDU.

(EEPROM in HHRC will keep the A or B information.)

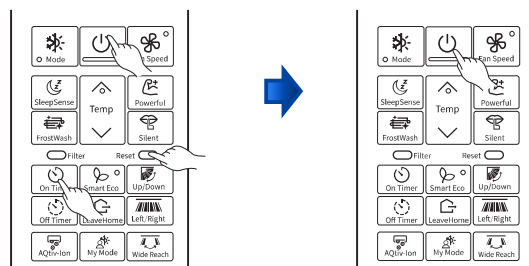


▪ DISPLAY MODE

For operating indoor unit independently (without outdoor unit connection), remote controller has to be set according to below procedures before send the signal to the indoor unit. New communication format between indoor and outdoor is required to communicate with outdoor unit.

1. Press and holding “On Times button” and “On/Off button”, press “reset button” on the same time.
2. Release “reset button” only and make sure that the FAN speed icon  on LCD display.
3. Press “On/Off button” toward IDU.

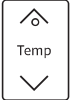
Then, the indoor unit will start to operate independently according to the selected operation mode.


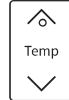




10.7. ERROR CODE INFORMATION

10.7.1. HOW TO DISPLAY ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t0” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.

5. Press “” (On/Off) button of the remote control, the fault information will be seen.

Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
Display self-diagnosis memory(※)	Display History 1 (Latest(newest) of last Five)	7J	t0	01
	Display History 2			02
	Display History 3			03
	Display History 4			04
	Display History 5			05


The specific information of error code is shown in the table below:



	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
INDOOR	-	-	000 00	Normal
	1 time	-	001 00	Refrigerant cycle fault
	2 times	-	-	Outdoor unit is under forced operation
	3 times	9 times	003 00	Communication error (indoor)
	9 times	-	009 00	Indoor thermistor defective
	10 times	-	010 00	Abnormal rotating numbers of DC fan motor
	12 times	9 times	012 00	Communication error (outdoor)
	13 times	-	013 00	EEPROM data reading error
	20 times	-	020 00	Human sensor defective
	21 times	-	021 00	Interface defective (other machine cause)
25 times	-	025 00	CN7A/B connection defective	


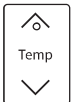
	OPERATION LAMP BLINKING	CODE	MEANING (THE FOLLOW DEFECTIVES IN OUTDOOR UNIT)
INDOOR	2 times	002 01	Peak current cut
	3 times	003 01	Compressor abnormal low speed rotation
	4 times	004 01	Compressor switching failure
	5 times	005 01	Overload lower limit cut
	6 times	006 01	OH thermistor temperature rise
	7 times	007 01	Abnormal outdoor thermistor
	9 times	009 01	Communication error
	10 times	010 01	Abnormal power source
	11 times	011 01	Fan stop for strong wind
	12 times	012 01	Fan motor fault
	13 times	013 01	EEPROM reading error
	14 times	014 01	DC Voltage abnormal
	15 times	015 01	Abnormal PWB circuit
	16 times	016 01	High load stop


9.7.2. HOW TO REMOVE ERROR CODE

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t2” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.

5. Press “” (On/Off) button of the remote control, and the error code will be removed.

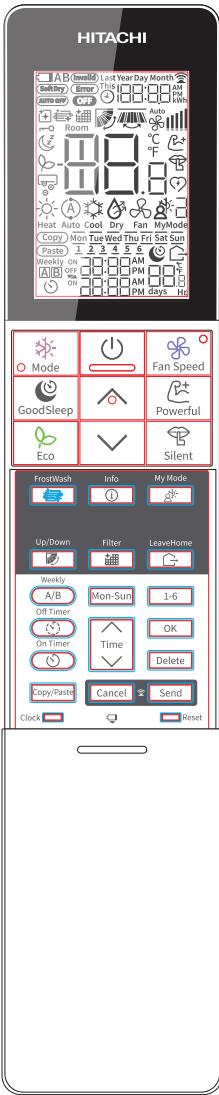









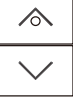










11 CONTROL AND FUNCTION

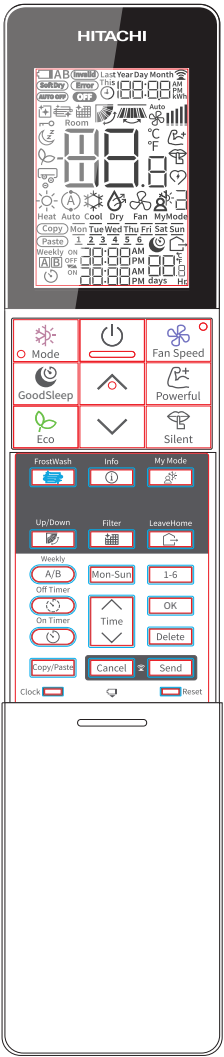











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11 CONTROL AND FUNCTION

11.1. WIRELESS REMOTE CONTROL FUNCTION

	BUTTONS	FUNCTION
 <p>HITACHI</p> <p>Mode, Fan Speed, GoodSleep, Eco, On/Off, Temperature, Fan Speed, Powerful, Silent, FrostWash, Up/Down, AQtiv-Ion, Info, Filter, My Mode, LeaveHome, Weekly, A/B, Mon-Sun, 1-6, Off Timer, On Timer, Time, Delete, Copy/Paste, Cancel, Send, Clock, Reset</p>		<p>Mode Selector Button Use this button to select the operation mode. Every time you press this button the mode will change from  (Heat) →  (Auto) →  (Cool) →  (Dry) →  (Fan) cyclically.</p>
		<p>GoodSleep Button the unit shifts the room temperature and reduces the fan speed.</p>
		<p>Eco Button Use this button to set the Eco mode.</p>
		<p>On/Off Button Press this button to start operation. Press it again to stop operation.</p>
		<p>Temperature Button Room temperature setting. Value will change quicker when keep pressing.</p>
		<p>Fan Speed Button Select the fan speed.</p>
		<p>Powerful Button The air conditioner performs at maximum power.</p>
		<p>Silent Button The fan speed changes to the silent fan speed</p>
		<p>FrostWash Button (Not Applicable) The dust and dirt adhering to indoor heat exchanger which is the cause of the smell.</p>
		<p>Up/Down Button Control the angle of the horizontal air deflector.</p>
		<p>AQtiv-Ion Button (Not Applicable)</p>
		<p>Info Button</p>
		<p>Filter Sign Reset Button (Not Applicable)</p>
	<p>RC-BGH1FB0N</p>	
	<p>LeaveHome Button Prevent the room temperature from falling too much by setting temperature 50°F~60°F when no one is at home.</p>	

	WEEKLY TIMER Buttons	FUNCTION
 <p>RC-BGH1FB0N</p>		<p>On Timer Button Select the turn ON time.</p>
		<p>Off Timer Button Select the turn OFF time.</p>
		<p>Time Button Press the button to set starting time of the program.</p>
		<p>OK Button Press the button to save the program. The button shall be pressed everytime after finishing a program setting.</p>
		<p>DELETE Button 1) Press the button to delete the selected program. 2) Press the button for about 10 seconds by directing the remote controller towards the indoor unit while Mode A or B display blinks, programs for Mode A or B will be deleted both from the indoor unit and the remote controller after the beep sound from the indoor unit. The program setting remains in the remote controller.</p>
		<p>DAY Button Select the desired day of the week.</p>
		<p>PROGRAM NO. Button Press this button to select a program number.</p>
		<p>CANCEL Button 1) Press the button to cancel the current setting process on the screen. 2) Press the button by directing the remote controller towards the indoor unit, then weekly timer setting will be canceled from indoor unit after the beep sound from the indoor unit. The program setting remains in the remote controller.</p>
		<p>SEND Button Press the button for about 3 seconds by directing the remote controller towards the indoor unit after finishing the program setting. Timer lamp on the indoor unit will blink rapidly and after the beep sound from indoor unit, TIMER lamp will light up.</p>
		<p>CLOCK Button Press the button to set calendar and clock.</p>
	<p>WEEKLY TIMER MODE Button 1) Select Mode A or Mode B. 2 modes can be set and stored as a weekly timer. 2) By pressing the button longer than 3 seconds, program setting screen will appear.</p>	

For more information, please refer to the operation manual.

11.2.SELF-DIAGNOSIS MEMORY FUNCTION

SELF-DIAGNOSIS MEMORY FUNCTION


Failure modes are stored in the nonvolatile memory of indoor unit and shall be redisplayed by remote controller.



This function is useful in checking the failure modes either during switching OFF the power or restarting the device with checking the number of indication lamp blinking . Remote controller can redisplay up to last 5 failure modes from the memory. However, failure modes which are rarely to occur are also stored in the memory which caused the numbers of failure more than 5. Thus, for some failure modes which are unable to retrieve because of remote controller limit to redisplay only 5 failure modes, it can be found by clearing up the memory first then recheck the memory content again during the visit at the customer place.



ERROR CODE INFORMATION

<HOW TO DISPLAY ERROR CODE>

1.Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t0” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.


5. Press “” (On/Off) button of the remote control, the fault information will be seen.



Function Name	Value	Layer1	Layer2	Layer3
		Category	Function	Value
Display self-diagnosis memory(※)	Display History 1 (Latest(newest) of last Five)	7J	t0	01
	Display History 2			02
	Display History 3			03
	Display History 4			04
	Display History 5			05



There is no special symbol on HHRC LCD screen.

<HOW TO REMOVE ERROR CODE>

1. Press three key ([On Timer] + [Fan Speed] + [Reset]) button on the remote control for 5 seconds to avoid access by User.

2. Press “” (Temperature) button of the remote control and select the “7J” option.

3. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “t2” option.

4. Press “” (Fan Speed) button of the remote control, then Press “” (Temperature) button select the “01” option.

5. Press “” (On/Off) button of the remote control, and the error code will be removed.

	TIMER LAMP BLINKING	LD301 BLINKING	CODE	MEANING
INDOOR	-	-	000 00	Normal
	1 time		001 00	Refrigerant cycle fault
	2 times	-	-	Outdoor unit is under forced operation
	3 times	9 times	003 00	Communication error (indoor)
	4 times	-	004 00	Outdoor unit defective
	8 times	-	008 00	Gas sensor interface defective
	9 times	-	009 00	Indoor thermistor defective
	10 times	-	010 00	Abnormal rotating numbers of DC fan motor
	12 times	9 times	012 00	Communication error (outdoor)
	13 times	-	013 00	EEPROM data reading error
	21 times	-	021 00	Interface defective (other machine cause)
	25 times	-	025 00	CN7A/B connection defective

< Caution >

This function is effective only once immediately after the power is turned on. It will not work if you have performed another remote control operation beforehand.

Note also that it may not function in response to a procedure other than the above. (If it does not work, turn off the power, turn it back on and repeat the procedure.)

If the memory stores nothing, performing a redisplay operation will not blink the lamp.

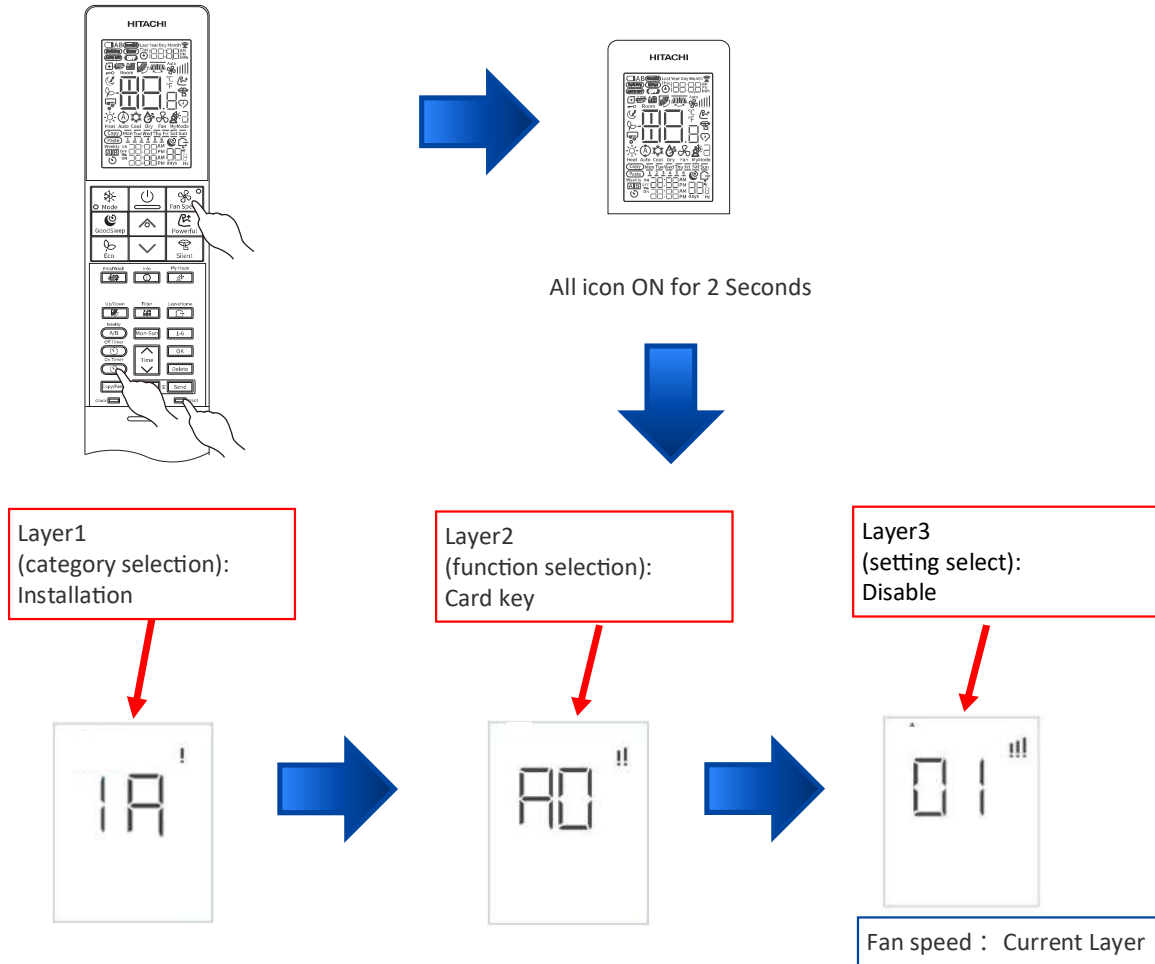
For a normal operation, turn off the power and turn it back on. After the above operation, the product will not receive a remote control signal normally.

After clearing the troubleshooting data, turn off the power. (If you do not turn off the power, the product will become unresponsive to remote control signals.)

11.3 How to set up from Service setting mode

The Service function, which was set by DIP-SW setting or double pressing of the HHRC in the current model. it will be done by HHRC in GRAC as shown as below.

[On timer] + [Fan speed] + [Reset]
 (Press three Key for 5 seconds to avoid access by User)

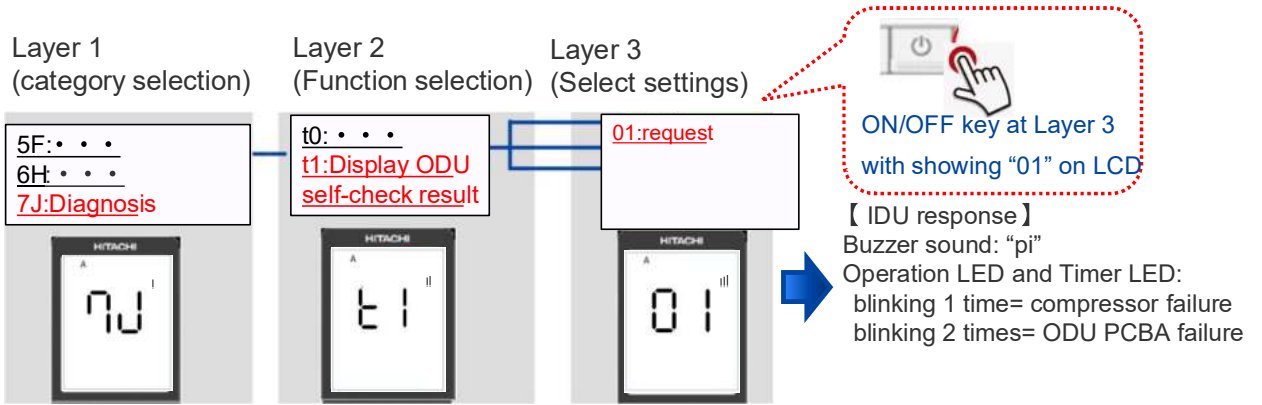


※ If you don't do anything for 30 seconds, you will be out of the service setting mode.

11.4. How to operate the HHRC method

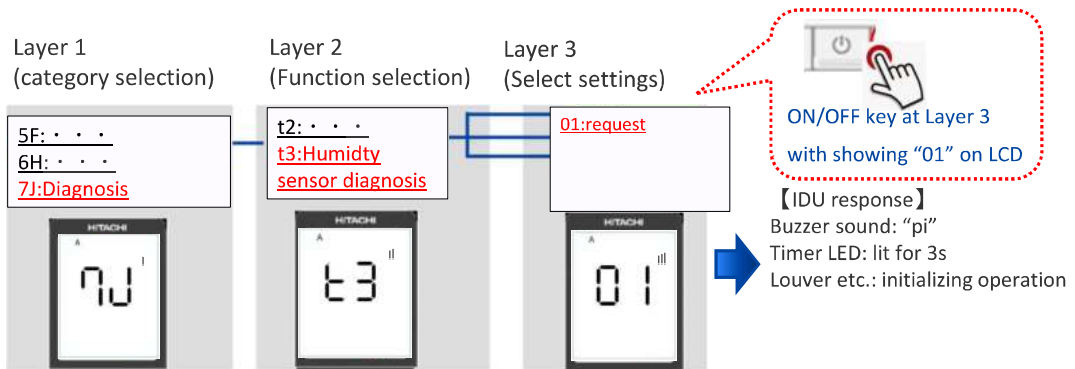
At ODU PCBA error or compressor error.
This function can be done after power supply off, and on.

Category	Function Name	Value	HHRC LCD display		
			Layer1	Layer2	Layer3
			Category	Function	Value
Diagnosis	Display ODU Self-check result	request	7J	t1	01
		reserve			02-99

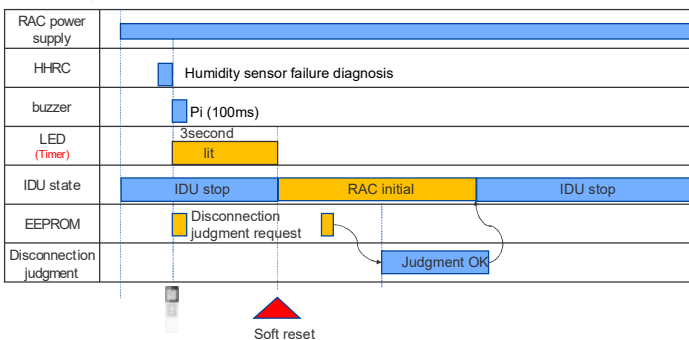


detailed diagnosis(humidity sensor diagnosis)

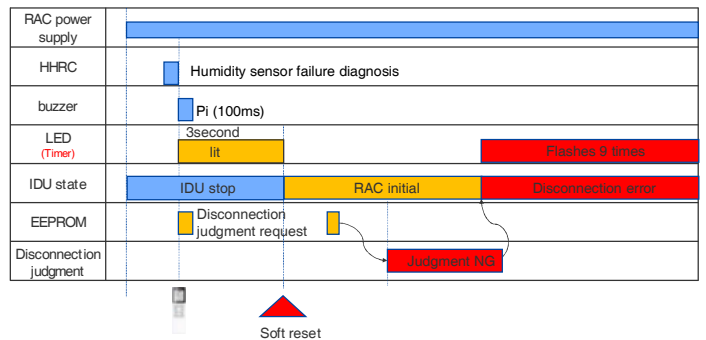
Category	Function Name	Value	HHRC LCD display		
			Layer1	Layer2	Layer3
			Category	Function	Value
Diagnosis	Humidity sensor diagnosis	request	7J	t3	01
		reserve			02-99



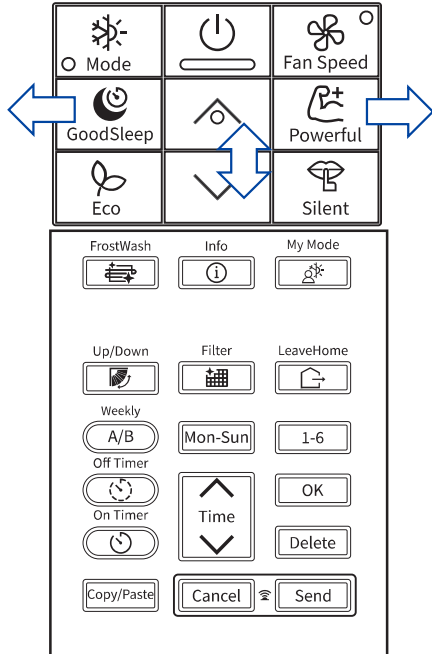
Humidity sensor: no defect case



Humidity sensor: defect case



How to operate the HHRC method

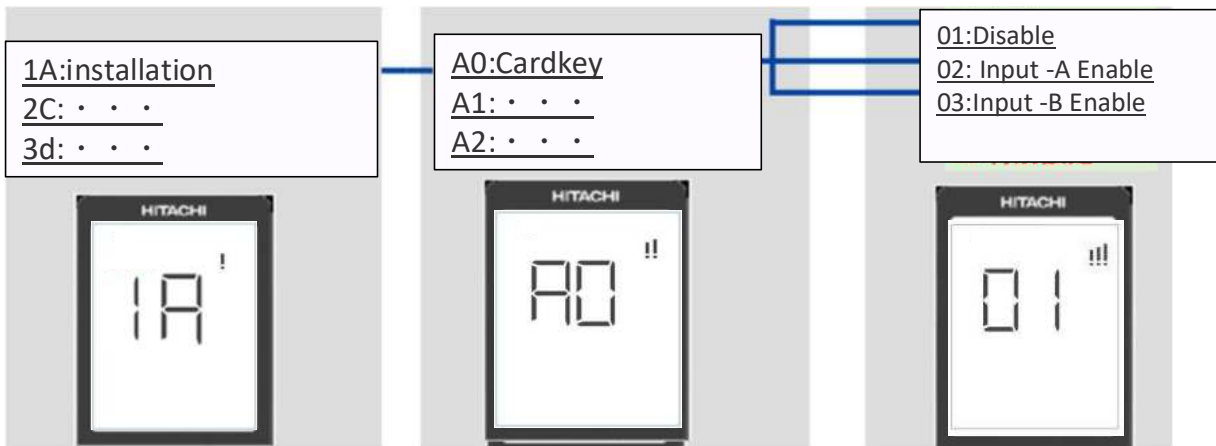


Temp Δ ∇ : Selection (in the same layer)
 Mode : move to previous layer
 Fan Speed : Move to next layer
 ON/OFF : Decision/Send (at layer 3)
 : Current setting check(at layer 2)
 Filter: category initialization(at layer 1)
 Filter + ON/OFF: all category initialization(at layer 1)
 ※ To exit from this setting mode, you need to either not operate the HHRC panel for 30 seconds or press and hold the UP/Down key for 5 seconds.

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Setting select)



The Adjust filter sign Time can be changed by the remote controller.
 (This procedure shall be implemented strictly by service personnel only.)
 It is possible to return it to the default setting.

Category	Function Name	Value	HHRC LCD display		
			Layer1 Category	Layer2 Function	Layer3 Value
Clean	Time for filter sign display	filter lamp lighting time:Adjustment -1(100h)	2C	C1	01
		filter lamp lighting time:Adjustment ±0(200h)			02
		filter lamp lighting time:Adjustment ±1(300h)			03
		filter lamp lighting time:Adjustment ±2(400h)			04
		reserve			05-99

Layer 1
(category selection)

Layer 2
(Function selection)

Layer 3
(Select settings)

1A: . . .	C0: Outdoor Frost wash	01:
2C: . . .	C1: Time for filter sign display	02:
3d: . . .	C2: IDU auto FrostWash period adjustment	03:
		04:



ON/OFF key at Layer 3
with showing "02" on LCD

【IDU response】

Buzzer sound: "pi"
 Timer LED: lit for 3s(only for "1A" category)
 Louver etc.: initializing operation

【note】

If receiving the order of "05"- "99", IDU buzzer sounds as "pipi-"(rejecting sound).

11.5. Service setting item used for HHRC (Wireless remote model : RC-BGH1FB0N)

Category	Function	Display on LCD Temperature 7 segment Layer Wise			Value setting meaning at Layer-3
		1	2	3	
Installation	Card Key	1A	A0	01	1 - Card Key Input - Disable
				02	2 - Contact A Enable
				03	3 - Contact B Enable
				04-99	4-99 : Reserved
	Heating/Cooling only mode select - (Operation Mode Lock)	1A	A1	01	1 - Normal Mode
				02	2 -Cooling Lock (Cool,Dry,A.circulator,Fan mode available)
				03	3 - Heating Lock (Heat and Fan mode available)
				04-99	4-99 : Reserved
	Auto restart switchover(Standard)	1A	A2	01	auto restart changeover disable
				02	auto restart by previous mode
				03-99	3-99 : Reserved
	Connecting of gas sensor	1A	A8	01	Normal
				02	Test
				03-99	Reserved
	Gas leak determination time	1A	A9	01	20Sec(initial value)
				02	40Sec
03-99				Reserved	
Gas leak detection reset	1A	AA	01	Gas leak detection reset	
			02-99	Reserved	
Cycle Operation	Defrost selection Function	3d	E0	01	01 - Standard Region
				02	02- Cold Region
				03-99	Reserved
	Set temperature shift adjustment (Cooling)	3d	E1	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
	12-99	Reserved			
	Set temperature shift adjustment (Heating)	3d	E2	01	Setting Temperature Shift Adjustment (-5°C/-10°F)
				02	Setting Temperature Shift Adjustment (-4°C/-8°F)
				03	Setting Temperature Shift Adjustment (-3°C/-6°F)
				04	Setting Temperature Shift Adjustment (-2°C/-4°F)
				05	Setting Temperature Shift Adjustment (-1°C/-2°F)
				06	Setting Temperature Shift Adjustment (±0°C/±0°F)
				07	Setting Temperature Shift Adjustment (+1°C/2°F)
				08	Setting Temperature Shift Adjustment (+2°C/4°F)
				09	Setting Temperature Shift Adjustment (+3°C/6°F)
				10	Setting Temperature Shift Adjustment (+4°C/8°F)
				11	Setting Temperature Shift Adjustment (+5°C/10°F)
	12-99	Reserved			
Indoor fan air speed when cooling thermostat is off	3d	E3	01	01 : standard	
			02	02 : Cold Region	
			03-99	Reserved	
Selection of indoor fan control during heating thermo-off	3d	E4	01	01 : Fan Control at the Time of Heating Thermo- Off "Pattern 1"	
			02	02 : Fan Control at the Time of Heating Thermo- Off "Pattern 2"	
			03	03 : Fan Control at the Time of Heating Thermo- Off "Pattern 3"	
			04-99	Reserved	

Service setting item used for HHRC (Wireless remote model: RC-BGH1FB0N)

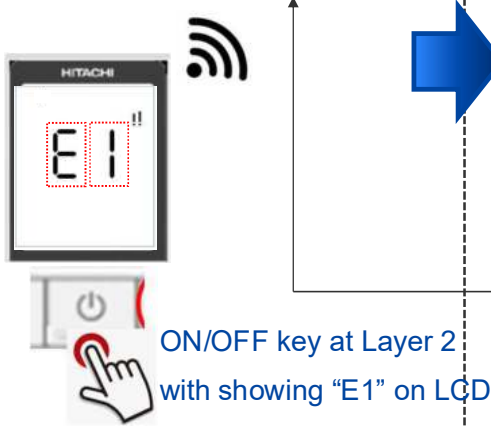
HHRC	Temperature Resolution change - 0.5°C→ 1°C	6H	P0	01	1 -0.5 °C Resolution 2-1 °C Resolution
	Fan Speed key sequence (Weaker to stronger , stronger to Weaker)	6H	P1	01	1 - Default (Auto-Silent-Low-Med-Hi-H2) 2- Reverse (Hi2-Hi-Med-Lo-Silent-Auto)
	Operation Mode : Auto	6H	P2	2	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Cool	6H	P3	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Dry	6H	P4	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Fan	6H	P5	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Operation Mode : Heat	6H	P6	02	1-Disable Selection on HHRC by Mode key 2 - Enable Selection on HHRC by Mode Key
	Auto Fan speed : Enable / Disable	6H	P8	02	1 -Disable Selection on HHRC by Fan key 2 - Enable Selection on HHRC by Fan Key
	Fan Speed tapping control	6H	P9	01	1- Normal (Auto, Silent, Low, Med, Hi, H2) Selection on HHRC by Fan key 2- (Auto, Silent, Lo, Med, Hi) Selection on HHRC by Fan key
	RTC and Timer setting Format change: 12 Hr Format / 24 HR Format (Only for RTC based models)	6H	PA	02	1 - 12 Hr Format with AM/PM for RTC and Timer ON, Timer OFF 2 - 24 Hr Format for RTC and Timer ON , Timer OFF
	Cooling Lower limit setting	6H	PC	16	(Lower set temp. start from 60 °F)
				17	(Lower set temp. start from 63°F)
				18	(Lower set temp. start from 64°F)
				19	(Lower set temp. start from 66°F)
				20	(Lower set temp. start from 68°F)
				21	(Lower set temp. start from 70°F)
				22	(Lower set temp. start from 72°F)
				23	(Lower set temp. start from 73°F)
				24	(Lower set temp. start from 76°F)
				25	(Lower set temp. start from 77°F)
26				(Lower set temp. start from 79°F)	
27				(Lower set temp. start from 80°F)	
Heating Upper limit setting	6H	Pd	32	(Upper set temp. start from 90 °F)	
			31	(Upper set temp. start from 88 °F)	
			30	(Upper set temp. start from 86 °F)	
			29	(Upper set temp. start from 84 °F)	
			28	(Upper set temp. start from 83 °F)	
			27	(Upper set temp. start from 80 °F)	
			26	(Upper set temp. start from 79 °F)	
			25	(Upper set temp. start from 77 °F)	
			24	(Upper set temp. start from 76 °F)	
			23	(Upper set temp. start from 73 °F)	
			22	(Upper set temp. start from 72 °F)	
			21	(Upper set temp. start from 70 °F)	
Diagnosis	Failure Indication(latest to last 5 times)	7J	t0	01	1: Failure Display History 1 (Latest of last Five)
				02	2: Failure Display History 2
				03	3: Failure Display History 3
				04	4: Failure Display History 4
				05	5: Failure Display History 5 (5 th Error)
				06-99	Reserved
	Display ODU self check (failure diagnosis start)	7J	t1	01	1 : Failure Diagnosis Start
				02-99	Reserved
	Failure Memory Erase	7J	t2	01	1:Failure Memory Erase
				02-99	Reserved
	Humidity Sensor failure diagnosis	7J	t3	01	1:Humidity ensor failure diagnosis request
				02-99	Reserved

Check of current service setting
(shift value adjustment of setting temperature(Cool Mode)example)

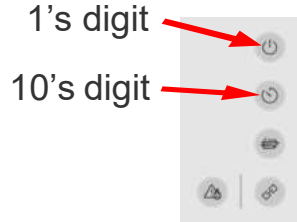
press on/off button toward IDU,
with showing "E1" at Layer 2
(IDU buzzer: "Pi")

Layer 2
(Function selection)

E0: . . .
E1: shift value adjustment of set temp. (Cool)
E2: . . .



IDU LED will show current setting by blinking.
(to show Layer 3 setting contents by blinking times)



<note>

- to show by 2digits with operation LED and timer LED
operation LED(10's digit), timer LED(1's digit)
- to be repeated 3 times
- during checking, this control has higher priority
than the operation from other devices.
- On airCloud Home application,
"during maintenance" is shown.

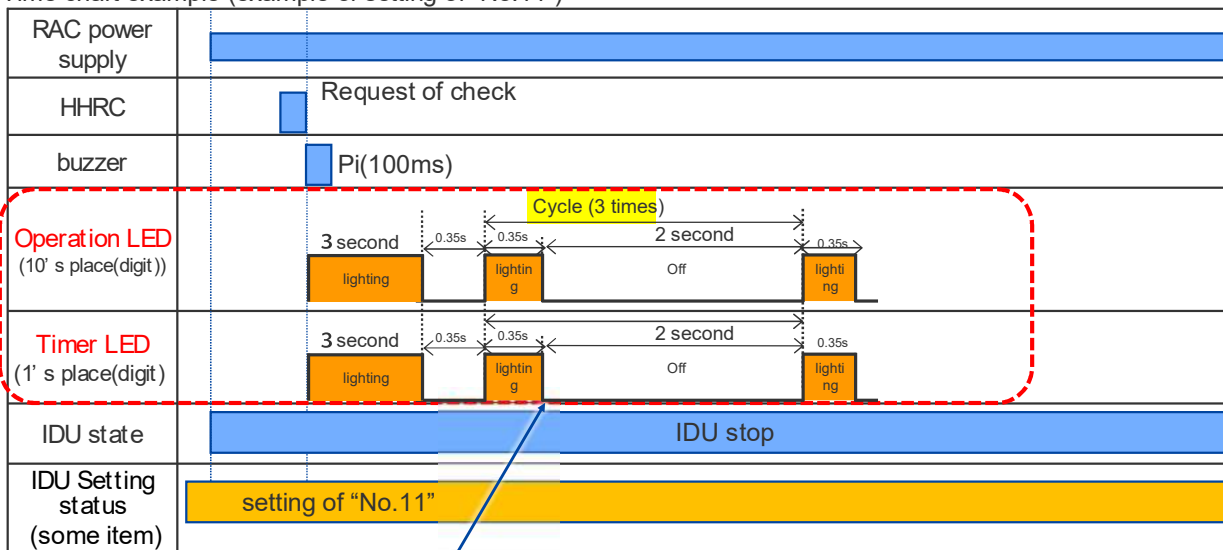
【Caution】

- At defect of IDU main
or display PCBA, this
function is not available.
it is necessary to record
the setting history on
service record card.
it will be packed with
manuals.

SERVICE RECORD					
Date	Setting Contents			Serviced By	Note
	Layer 1	Layer 2	Layer 3		

To service engineers:
Explain the service contents, and write down it if necessary.
Ask a customer to keep this paper together with the instruction
manual.

Time chart example (example of setting of "No.11")



- During blinking,
- check command of same service function -> stop the blinking
 - check command of new service function -> blinking for showing the current setting for function

11.6 Buzzer sounding for showing error contents

【Purpose】

Reduction of “mis-communication about error contents” at contacting the service call center.

【Function】

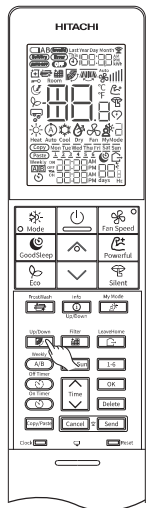
Add buzzer sounding for showing error contents during error, in addition to IDU LED action .

【How to use】

When IDU or ODU has failed, and the Timer lamp is blinking. Service engineer can know error contents from the buzzer through phone.

[Up/Down]

(Press this Key for 5 seconds)



In case of IDU failure



LED action



Timer lamp is blinking

Buzzer action



【note】
· for stopping buzzer, stop by On/Off button.

In case of ODU failure



LED action



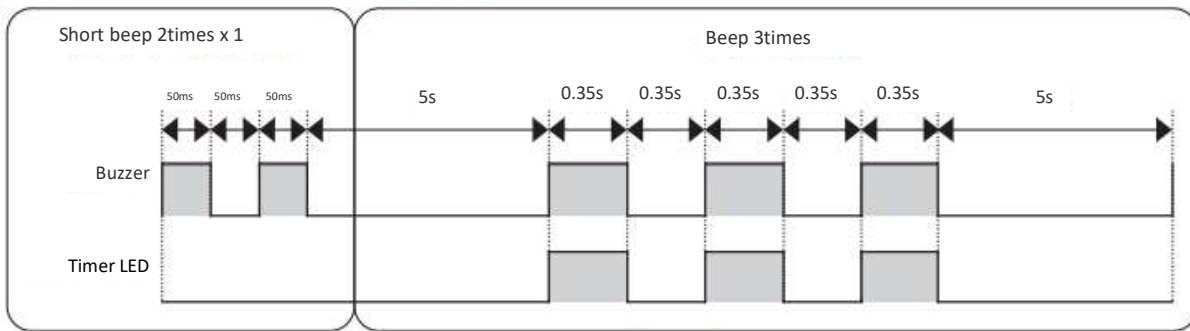
Operation lamp is blinking

Buzzer action



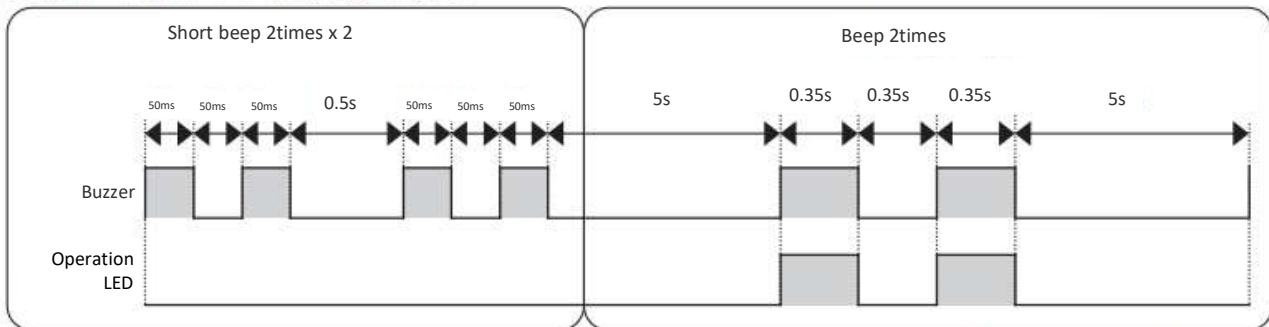
Sounding by same rhythm with LED

<IDU error example: timer LED will blink 3 times(interface defective(IDU) >



After “Short 2times x 1 beep”, “3 times beep” will be repeated.

<ODU error example: operation LED will blink 2 times(peak current cut) >



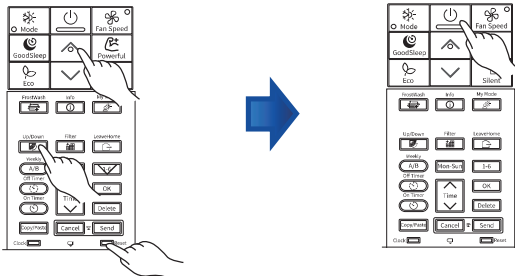
After “Short 2times x 2 beep”, “2 times beep” will be repeated.

11.7 OTHER SETTING

• SETTING THE PREVENTION OF MUTUAL INTERFERENCE FOR REMOTE CONTROLLER


Case: 2 set of indoor units installed near to each other. If both indoor units can receive the remote controller signal, please set the remote controller as below. (This setting will change the signal address of each remote controller.)

- 1.The circuit breaker for the unit shall be OFF.
- 2.Press and holding “UP/Down swing button” and “set. Temp. up button” and “reset button”. Release “reset button” only and when the LCD display “A”.
- 3.Select from A or B by pressing “set. Temp. button”.
- 4.Press “On/Off button” toward IDU. (EEPROM in HHRC will keep the A or B information.)

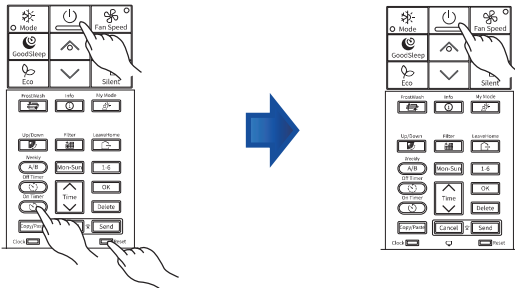


• DISPLAY OPERATION MODE SETTING

For operating indoor unit independently (without outdoor unit connection), remote controller has to be set according to below procedures before send the signal to the indoor unit. New communication format between indoor and outdoor is required to communicate with outdoor unit.

- 1.Press and holding “On Times button” and “On/Off button”, press “reset button” on the same time.
- 2.Release “reset button” only and make sure that the FAN speed icon  on LCD display.
- 3.Press “On/Off button” toward IDU.


Then, the indoor unit will starts to operate independently according the selected operation mode.



【Purpose】

To help the installers(service engineer) to notice the abnormality at installation, we add the new control.

【new operation test mode】

1. Operate with Cool Mode(in summer) or Heat Mode(in winter).
 2. Set setting temperature to 16.0°C for Cool Mode or 32.0°C for Heat Mode.
And set the desired fan speed to "  "(High).
 3. Operate RAC for 20 minutes at least, and make sure that the outlet air is cool or warm.
 4. Press On/Off Button on HHRC and make sure that RAC stops the operation.
- If the IDU LED would blink with sounding the buzzer during the operation test, perform a check.
Before the check and the reoperation, reset the power supply.
 - For connections multi, testing indoor unit will buzzer, other indoor unit will not buzzer.

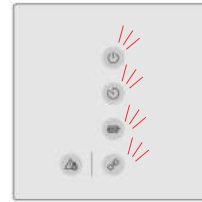


Buzzer will sound 3 times

IDU LED blinking mode	What to check
All IDU LED blinks 3 times repeatedly. (Only Operation/Timer LED blinks for Floor model)	Make sure that the spindles of both service valves are open

【caution】

- Don't operate for over 5 minutes with the situation that the spindle of the service valve is closed.
- Don't operate by Cool Mode with the door and windows opened for a long period.
- During test operation for connections multi, each unit must be operated separately and ensure normal operation.
- For connections multi, If the indoor unit does not operate, check to see that the connections are correct.



Operation/Timer/FrostWash /Wifi LED blinks 3 times

	Please confirm fixing sheet which don't put it into drain pan to avoid to drain water fall down.
--	--

4. Service setting for gas sensor(Turn on the circuit breaker first)

Enter service setting mode then follow the table path to complete the sensor connection.

Category	Function Name	Value	HHRC LCD display		
			Layer1	Layer2	Layer3
			Category	Function	Value
Installation	Connecting of gas sensor(floor)	Normal	1A	A8	01
		Test			02
		reserve			03-99

Layer 1 (category selection) Layer 2 (Function selection) Layer 3 (Select settings)

<u>1A:installation</u> 2C: . . . 3d: . . .	<u>A8:</u> A9: . . . AA: . . .	<u>01: Normal</u> 02:Test
--	--------------------------------------	------------------------------



[[IDU response]
 Buzzer sound: "pi"
 Timer LED: lit for 3s(only for "1A" category)

[note]
 If receiving the order of "03"- "99",
 IDU buzzer sounds as "pipi-"(rejecting sound).

5. Installation confirmation

The green led lights during connection was normal, If there are abnormal indications, Please refer as follows.

6. If the refrigerant leaks, the refrigerant lamp blinks and the buzzer rings, use the HHRC to reset.

Category	Function Name	Value	HHRC LCD display		
			Layer1	Layer2	Layer3
			Category	Function	Value
Installation	Gas leak determination reset	reset	1A	AA	01
		reserve			02-99

Layer 1 (category selection) Layer 2 (Function selection) Layer 3 (Select settings)

<u>1A:installation</u> 2C: . . . 3d: . . .	<u>A8:</u> A9: . . . AA: . . .	<u>01: reset</u>
--	--------------------------------------	------------------



[[IDU response]
 Buzzer sound "pi" then stop ringing
 Refrigerant LED: stop blinking

[note]
 If receiving the order of "02"- "99",
 IDU buzzer sounds as "pipi-"(rejecting sound).

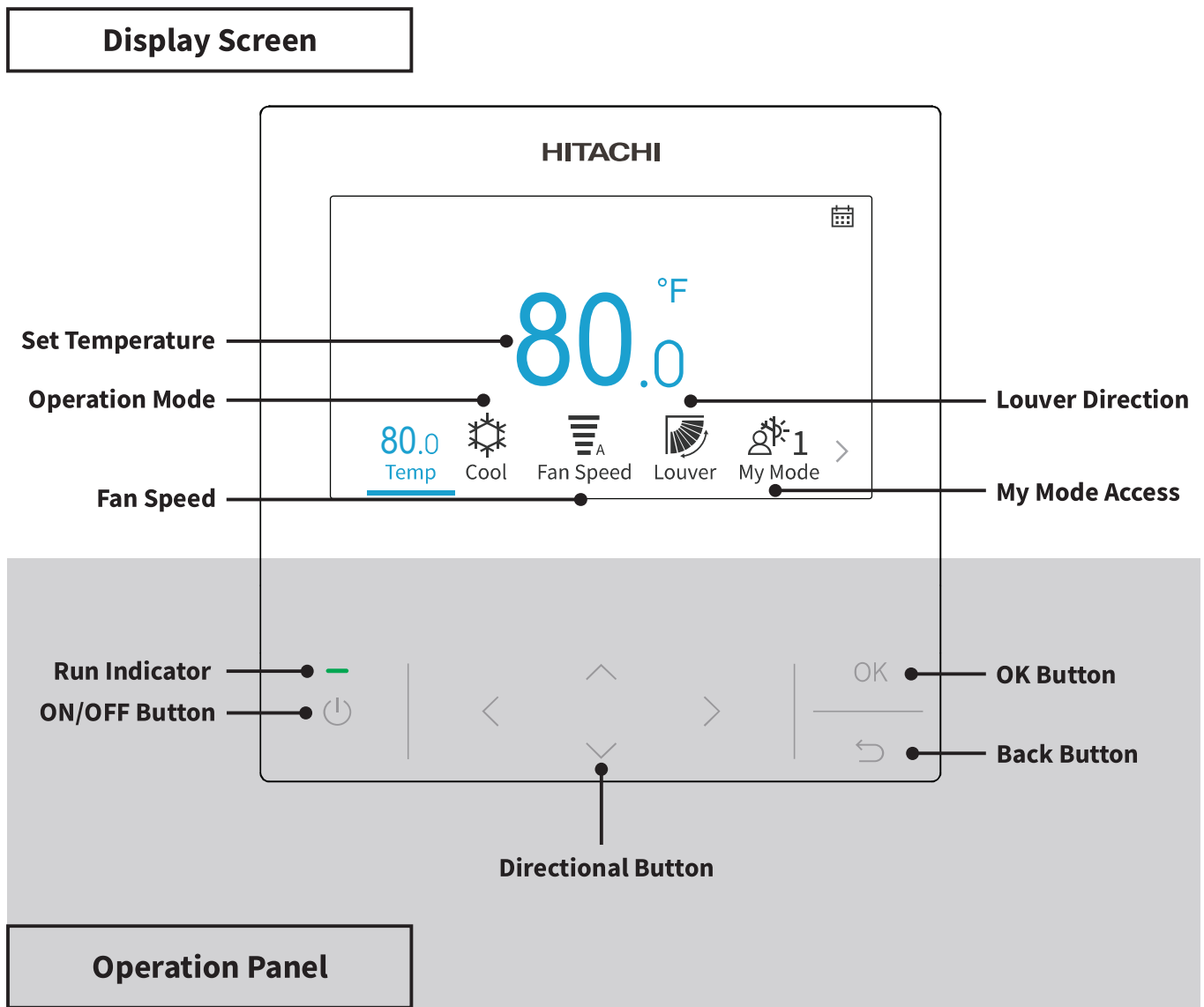
12 OPTION LIST

CONTENTS

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12.1 Wired remote control - SPX-URFG

The figure below shows all the functions for reference. The actual display during operation is different.



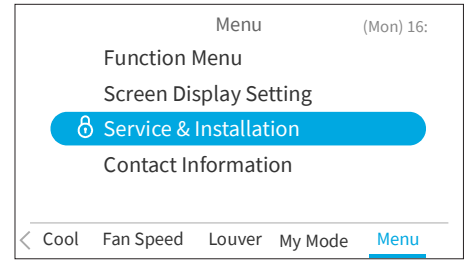
NOTES:

- If the screen is off or the backlight is dim, press any button to re-energise the screen.
- Make sure to press the buttons lightly with your fingertips.
- Do NOT press the buttons with any sharp objects as it may damage the button.

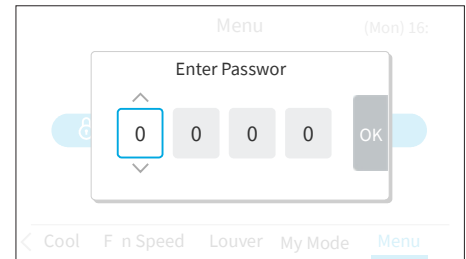
12.1.1. Service & Installation Screen

Service & Installation menu is protected by a password.

Step1. Select "Service & Installation" on "Menu" screen and press "OK".



Step2. Press "^", "v", "<", or ">" to input the password. Press ">" to select "OK" and press "OK" to enter Service & Installation menu screen.



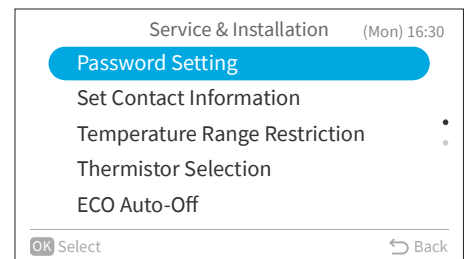
1. Password Setting

The default user password can be changed. If you forget the changed user password, a supervisor password can be used to reset the user password again. The supervisor password is "5567". The password input effective time can be set also.

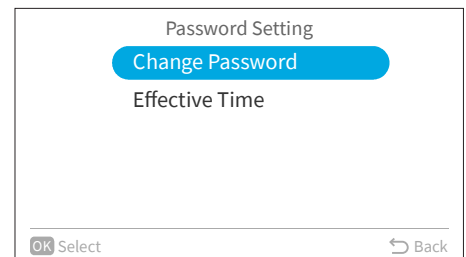
If the password input effective time has been set, then the password is required to be entered only once during the password effective time.

1. Change Password

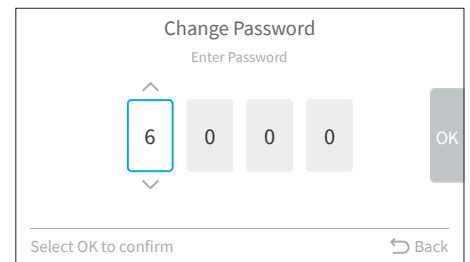
Step1. Select "Password Setting" on Service & Installation screen and press "OK"



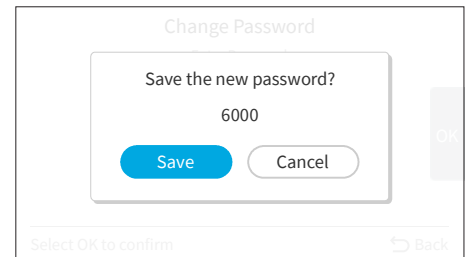
Step2. Select "Change Password" and press "OK".



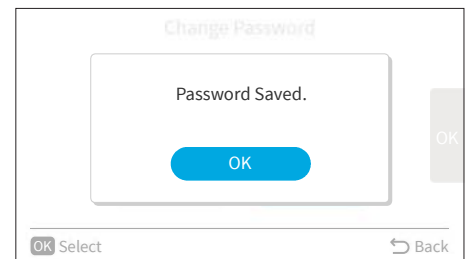
Step3. Press "^", "v", "<", or ">" to set the password, select "OK" and press "OK".



Step4. Press "<" or ">" to select "Save" and press "OK" to save password.



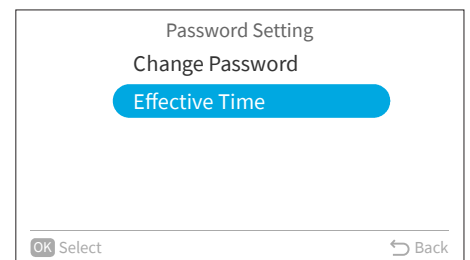
Press "OK", the new password is saved.



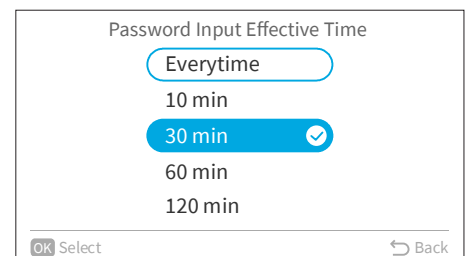
2. Set Password Input Effective Time

Step1. Select "Password Setting" on the Service & Installation screen and press "OK".

Step2. Select "Effective Time" and press "OK".



Step3. Press "^" or "v" to select the setting item and press "OK" to confirm the setting. The item changes as follows:
 "Everytime" ↔ "10 min" ↔ "30 min" ↔ "60 min" ↔ "120 min".
 Press "↶" and it returns to Step3.



NOTES:

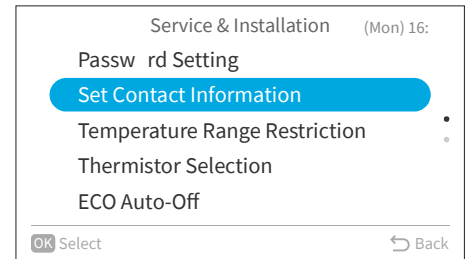
- In order to enhance the security protection, please be sure to change the default password.
- If you enter the wrong password more than 5 times, you will not be able to enter the password within 1 minute.
- The default password is "0000", and the supervisor code is "5567".
- If you forget the password, use the supervisor code to change the password.
- The supervisor code can't be changed.

2. Set Contact Information

Register a service contact (service address and service telephone number are recommended).

1. Register Contact Information

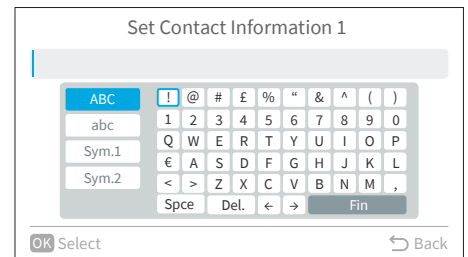
Step1. Select "Set Contact Information" on the Service & Installation screen and press "OK".



Step2. "Set Contact Information1" screen is displayed. Press "<" to move cursor to font type. Press "^" or "v" to select the font type.

*Each time you want to change the font type, press "<" to move the cursor back to font type.

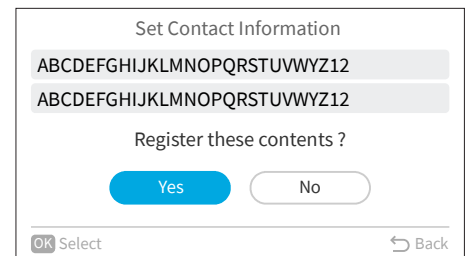
Step3. Press ">" to move cursor to the keypad. Press "^", "v", "<", or ">" to select the font and press "OK" to register it. (Up to 60 characters can be used for each contact information.)



Step4. After all the characters have been set, select "Fin" and press "OK".

Step5. "Set Contact Information2" screen is displayed, repeat Step2, Step3 and Step4.

Step6. Select "Yes" and press "OK" to confirm the setting and Step1 is displayed. If "No" is selected, the screen returns to Step2.

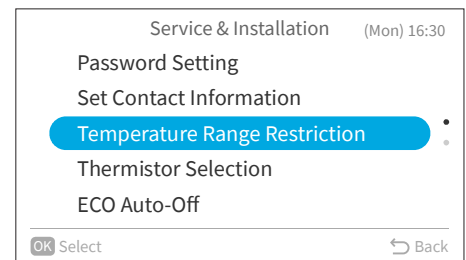


3. Temperature Range Restriction

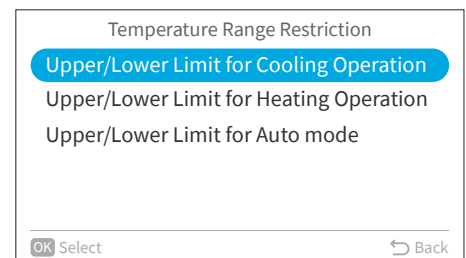
The temperature range can be set by the wired remote controller.

1. Set Temperature Range

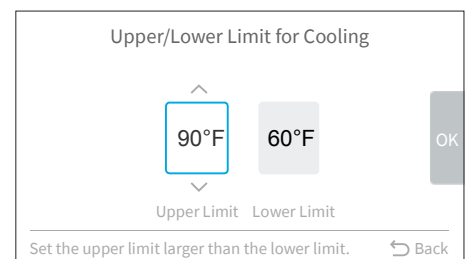
- Step1. Select "Temperature Range Restriction" on the Service & Installation screen and press "OK".



- Step2. Select "Upper/Lower Limit for Cooling Operation"/"Upper/Lower Limit for Heating Operation"/ "Upper/Lower Limit for Auto mode" and press "OK".



- Step3. Press "<", ">" to select the setting limit, then press "^", "v" to change the temperature value.
- Step4. After value setting, select "OK" and press "OK". Press "↶" to return to Step2.



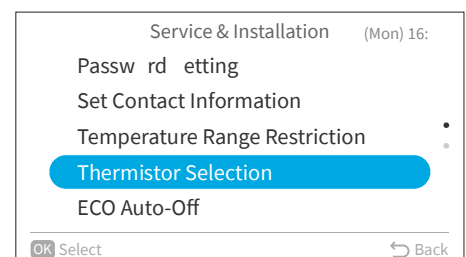
NOTE:

- Please make sure that the upper limit value is equal to or greater than the lower limit value.

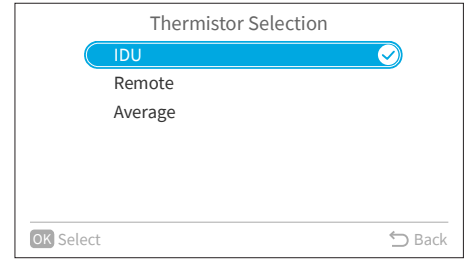
4. Thermistor Selection

This function is to select wired remote controller thermistor or indoor unit thermistor as the room temperature.

- Step1. Select "Thermistor Selection" on the Service & Installation screen and press "OK".



Step2. Select the desired item and press "OK"



NOTE:

- If one of indoor unit or wired remote controller thermistor is broken, the other normal thermistor is selected automatically.

5. ECO Auto-Off

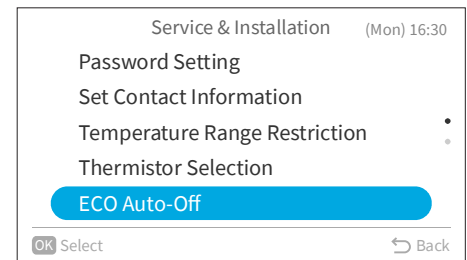
The default Auto-off time is set at 20min, it can be changed from 20min to 120min as described below. When the timer defined by "Auto-Off Timing" elapsed, wired remote controller will turn off indoor unit.

NOTE:

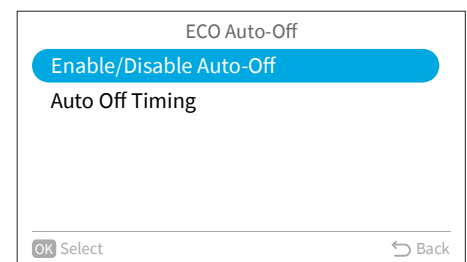
- "ECO Auto-Off" is hidden in Service & Installation screen when "ECO Mode with Auto-Off" is shown in Functions for ECO mode of Function Menu.

1. Enable/Disable Auto-Off

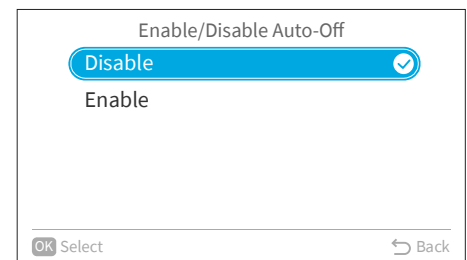
Step1. Select "ECO Auto-Off" on the Service & Installation screen and press "OK".



Step2. Select "Enable/Disable Auto-Off" and press "OK".

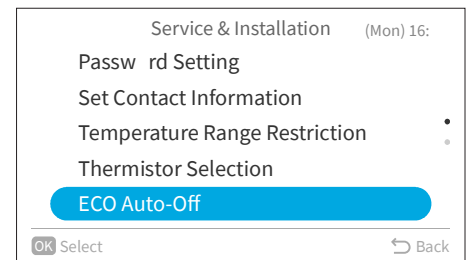


Step3. Press "^" or "v" to select "Disable"/"Enable" and press "OK" to enable/disable Auto-Off.

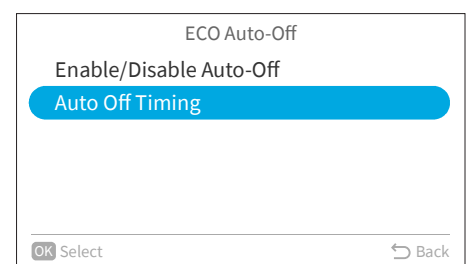


2. Set Auto-Off Timing

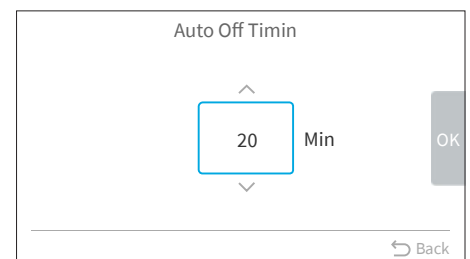
Step1. Select "ECO Auto-Off" on the Service & Installation screen and press "OK".



Step2. Press "∨" to select "Auto-Off Timing" and press "OK".



Step3. Press "∧" or "∨" to change the time from 20min to 120min, then press ">" to select "OK" and press "OK".

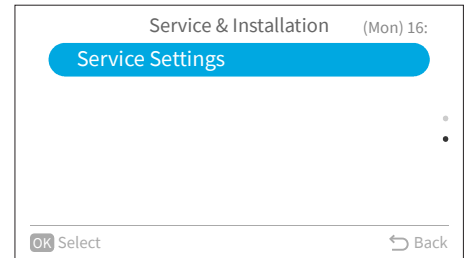


12.1.2 Service Settings

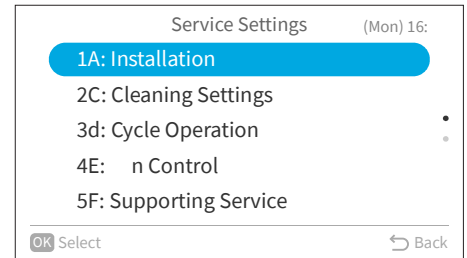
- The service setting items displayed in list depend on indoor unit model.
- When no operation for 2 hours on Service settings or sub settings screen, it returns to Home screen.
- When the air conditioner is turned on, service setting is disabled.
- For more information of service settings, please refer to service manual of the wired remote controller.

1. 1A: Installation

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

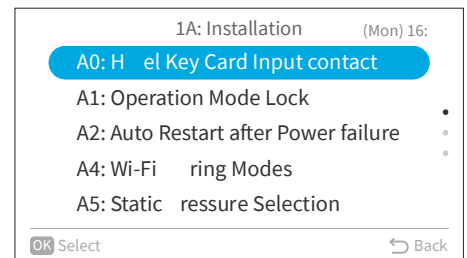


Step2. Select "1A: Installation" and press "OK".

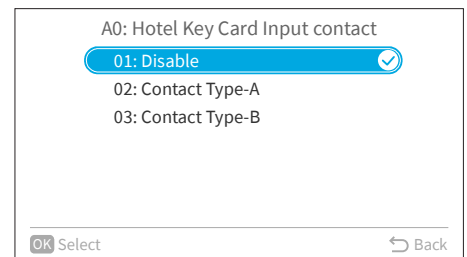


1.1 A0: Hotel Key Card Input contact

Step1. Select "A0: Hotel Key Card Input contact" and press "OK".

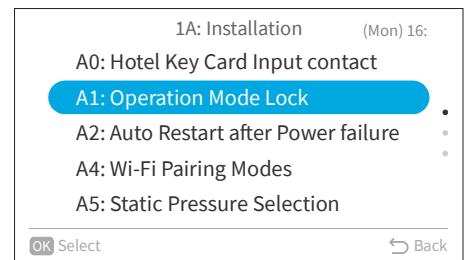


Step2. Press "^" or "v" to select the desired item and press "OK".

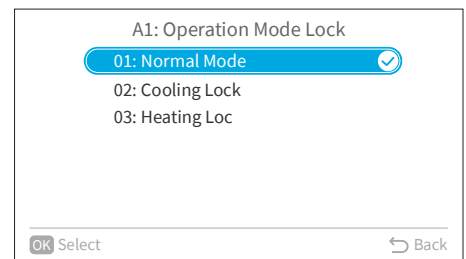


1.2 A1: Operation Mode Lock

Step1. Select "A1: Operation Mode Lock" and press "OK".



Step2. Press "^" or "v" to select the desired item and press "OK".

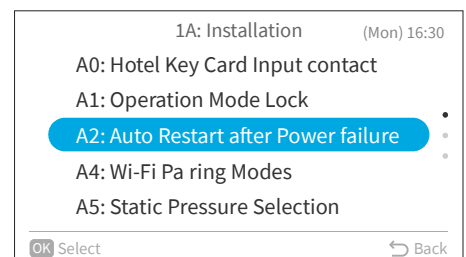


NOTE:

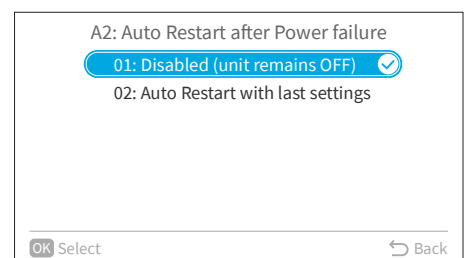
- The operation lock setting will remain unchanged after the unit is turned off.

1.3 A2: Auto Restart after Power failure

Step1. Select "A2: Auto Restart after Power failure" and press "OK".

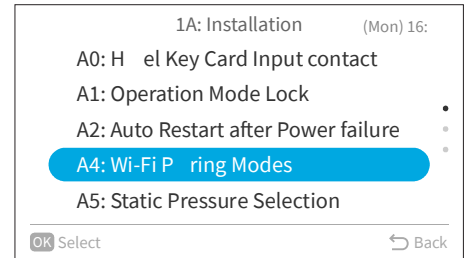


Step2. Press "^" or "v" to select the desired item and press "OK".

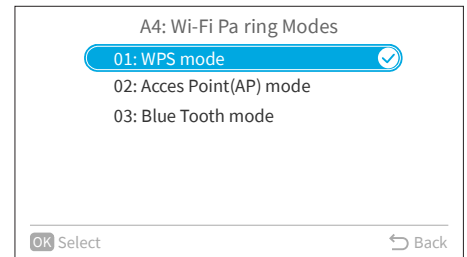


1.4 A4: Wi-Fi Pairing Mode

Step1. Select "A4: Wi-Fi Pairing Mode" and press "OK"

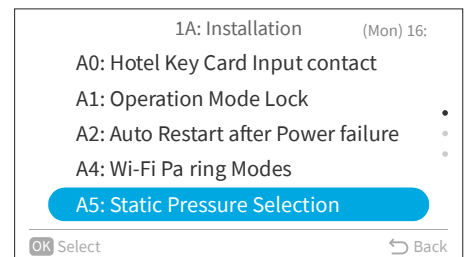


Step2. Press "^" or "v" to select the desired item and press "OK".

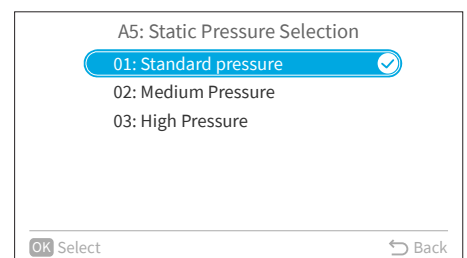


1.5 A5: Static Pressure Selection

Step1. Select "A5: Static Pressure Selection" and press "OK".

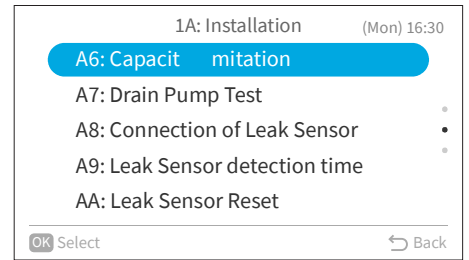


Step2. Press "^" or "v" to select the desired item and press "OK".

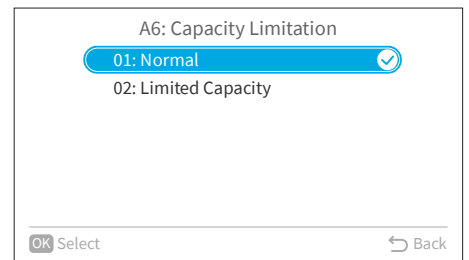


1.6 A6: Capacity Limitation (For models: Not Applicable)

Step1. Select "A6: Capacity Limitation" and press "OK".

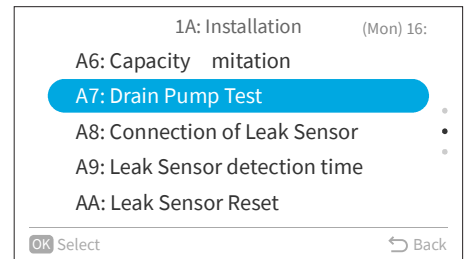


Step2. Press "^" or "v" to select the desired item and press "OK".

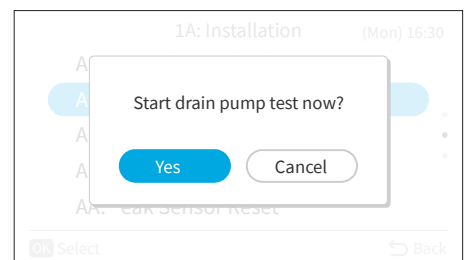


1.7 A7: Drain Pump Test

Step1. Select "A7: Drain Pump Test" and press "OK".

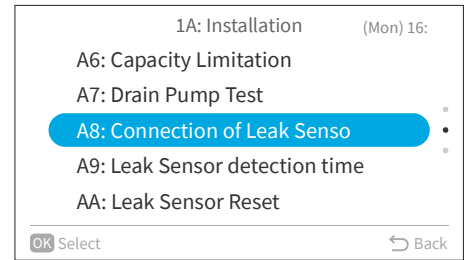


Step2. Select "Yes" and press "OK" to start drain pump test.

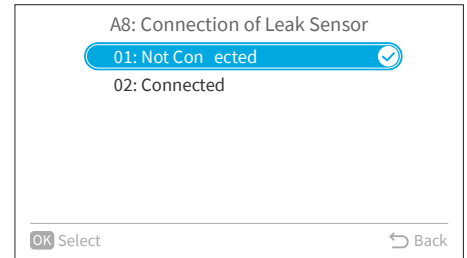


1.8 A8: Connection of Leak Sensor

Step1. Select "A8: Connection of Leak Sensor" and press "OK".

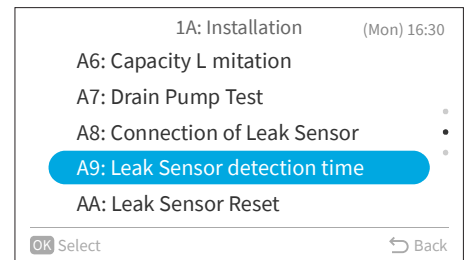


Step2. Press "^" or "v" to select the desired item and press "OK".

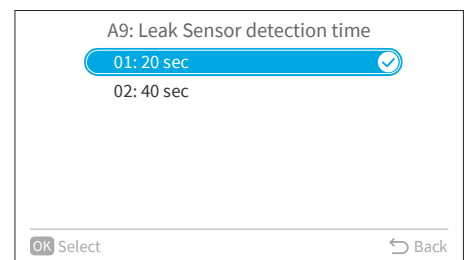


1.9 A9: Leak Sensor detection time

Step1. Select "A9: Leak Sensor detection time" and press "OK".

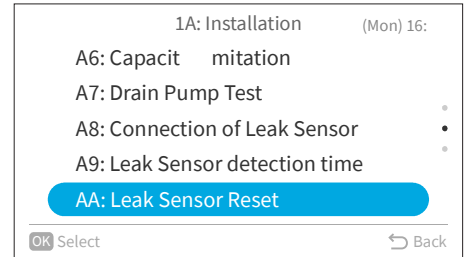


Step2. Press "^" or "v" to select the desired item and press "OK".

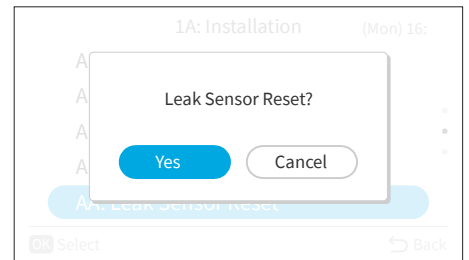


1.10 AA: Leak Sensor Reset

Step1. Select "AA: Leak Sensor Reset" and press "OK"

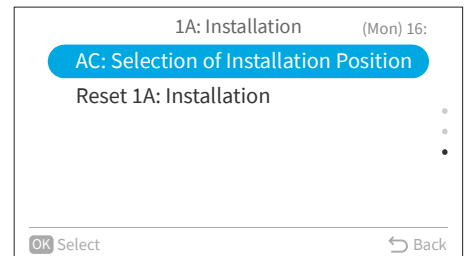


Step2. Select "Yes" and press "OK" to reset leak sensor.

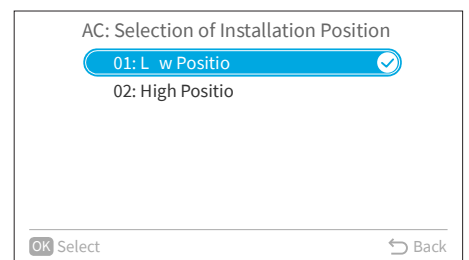


1.11 AC: Selection of Installation Position

Step1. Select "AC: Selection of Installation Position" and press "OK".

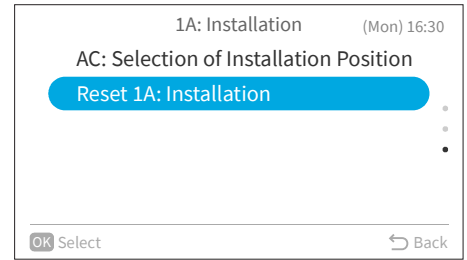


Step2. Press "^" or "v" to select the desired item and press "OK".

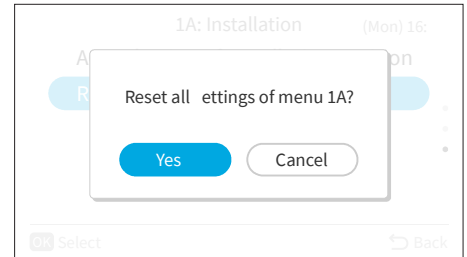


1.12 Reset 1A: Installation

Step1. Select "Reset 1A: Installation" and press "OK".

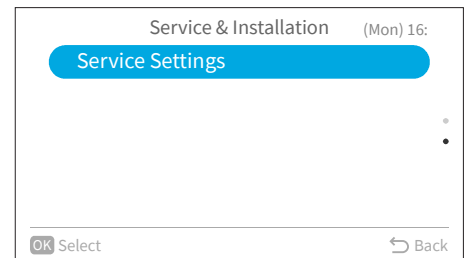


Step2. Select "Yes" and press "OK" to reset all settings of menu 1A.

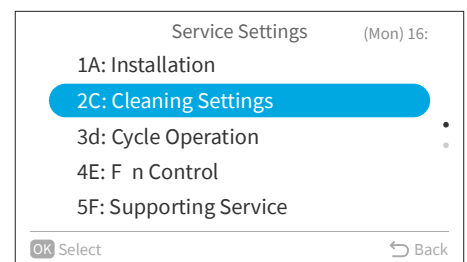


2 2C: Cleaning Settings

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

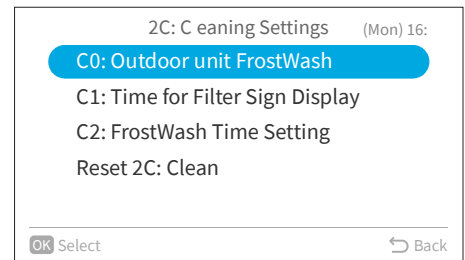


Step2. Select "2C: Cleaning Settings" and press "OK".

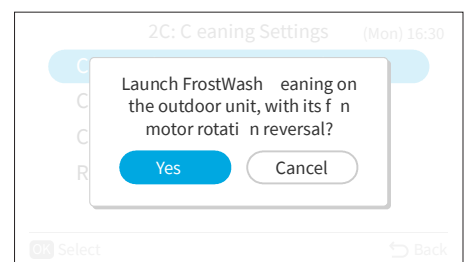


2.1 C0: Outdoor unit FrostWash

Step1. Select "C0: Outdoor unit FrostWash" and press "OK"

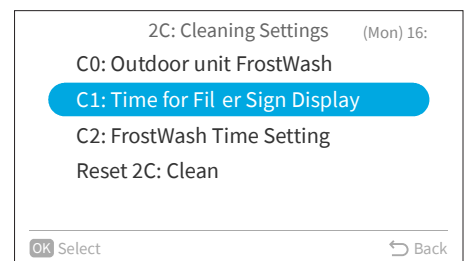


Step2. Select "Yes" and press "OK" to launch Frostwash cleaning.

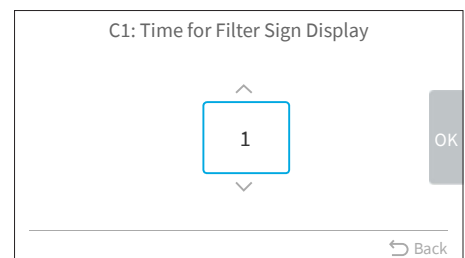


2.2 C1: Time for Filter Sign Display

Step1. Select "C1: Time for Filter Sign Display" and press "OK".

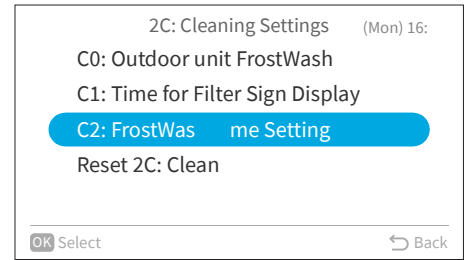


Step2. Press "^" or "v" to change the temperature, then press ">" to select "OK" and press "OK"

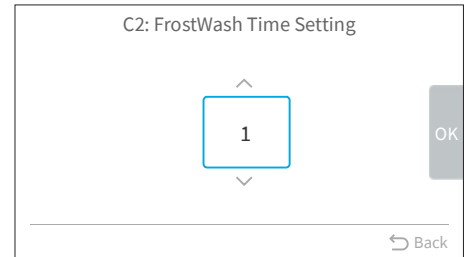


2.3 C2: FrostWash Time Setting

Step1. Select "C2: FrostWash Time Setting" and press "OK".

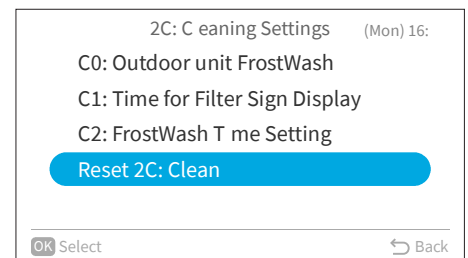


Step2. Press "^" or "v" to change the FrostWash time, then press ">" to select "OK" and press "OK".

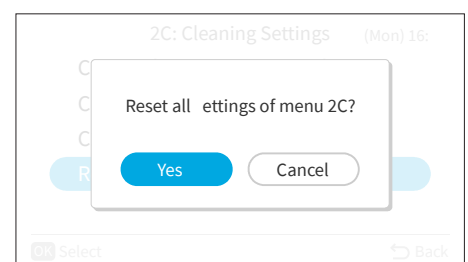


2.4 Reset 2C: Clean

Step1. Select "Reset 2C: Clean" and press "OK".

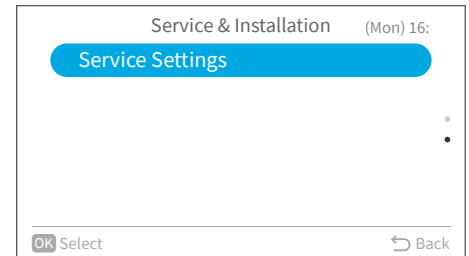


Step2. Select "Yes" and press "OK" to reset all settings of menu 2C.

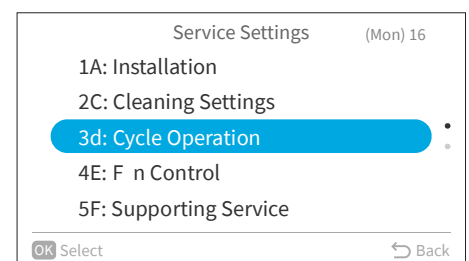


3. 3d: Cycle Operation

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

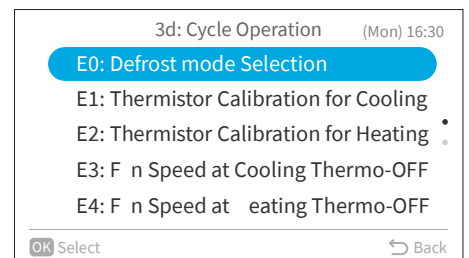


Step2. Select "3d: Cycle Operation" and press "OK".

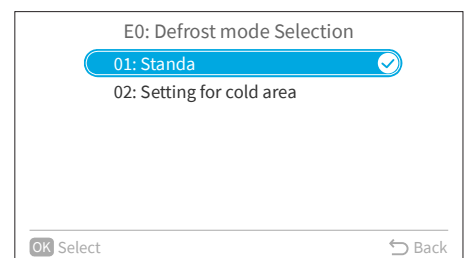


3.1 E0: Defrost Selection Function

Step1. Select "E0: Defrost Selection Function" and press "OK".

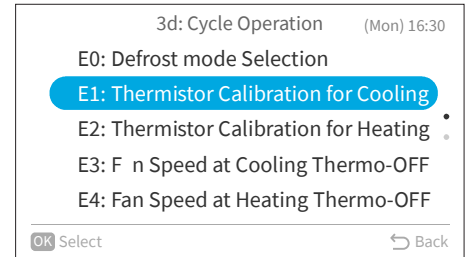


Step2. Press "^" or "v" to select the desired item and press "OK".

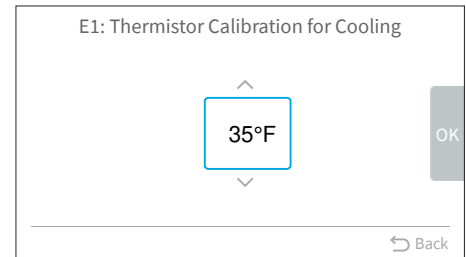


3.2 E1: Thermistor Calibration for Cooling

Step1. Select "E1: Thermistor Calibration for Cooling" and press "OK".

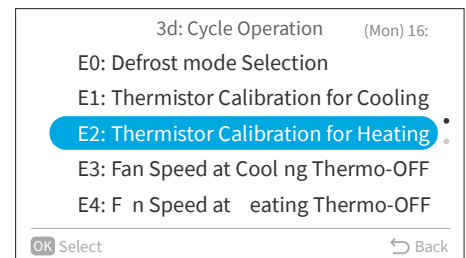


Step2. Press "^" or "v" to change the temperature, then press ">" to select "OK" and press "OK".

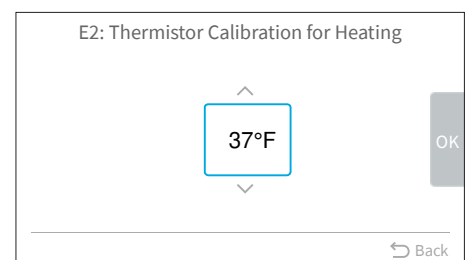


3.3 E2: Thermistor Calibration for Heating

Step1. Select "E2: Thermistor Calibration for Heating" and press "OK".

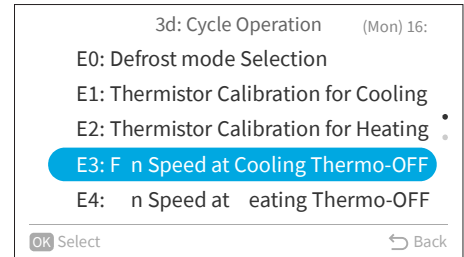


Step2. Press "^" or "v" to change the temperature, then press ">" to select "OK" and press "OK".

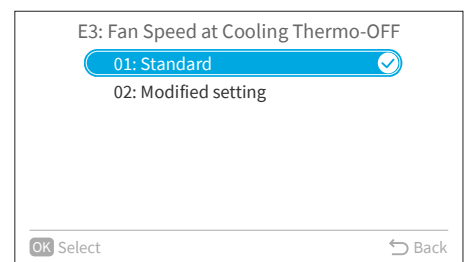


3.4 E3: Fan Speed at Cooling Thermo-OFF

Step1. Select "E3: Fan Speed at Cooling Thermo-OFF" and press "OK".

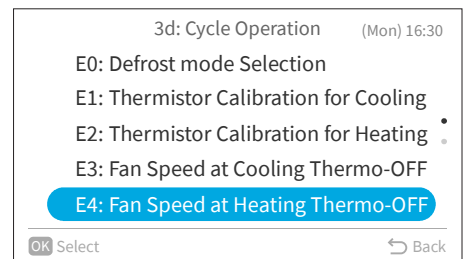


Step2. Press "^" or "v" to select the desired item and press "OK".

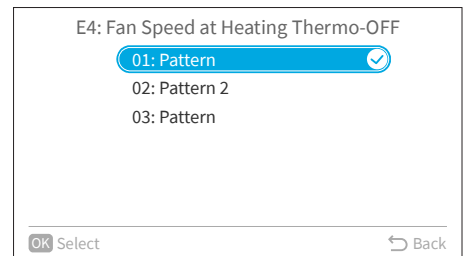


3.5 E4: Fan Speed at Heating Thermo-OFF

Step1. Select "E4: Fan Speed at Heating Thermo-OFF" and press "OK".

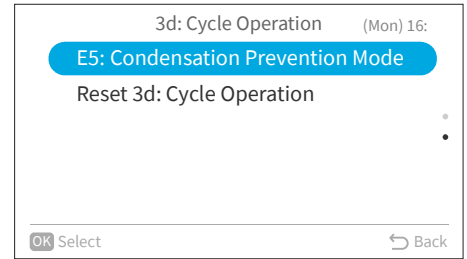


Step2. Press "^" or "v" to select the desired item and press "OK".

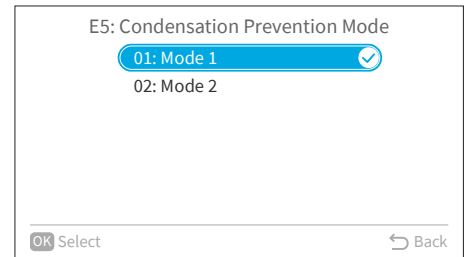


3.6 E5: Condensation Prevention Mode

Step1. Select "E5: Condensation Prevention Mode" and press "OK".

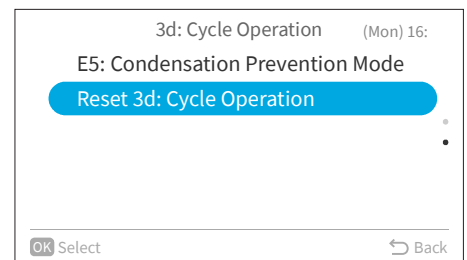


Step2. Press "^" or "v" to select the desired item and press "OK"

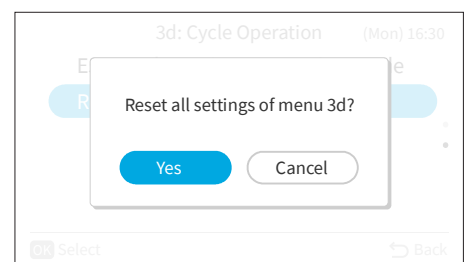


3.7 Reset 3d: Cycle Operation

Step1. Select "Reset 3d: Cycle Operation" and press "OK".

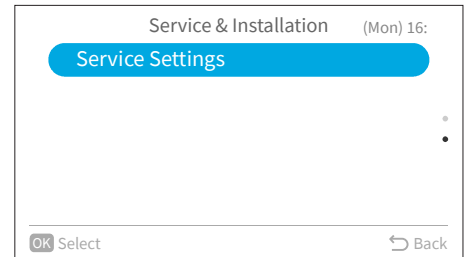


Step2. Select "Yes" and press "OK" to reset all settings of menu 3d.

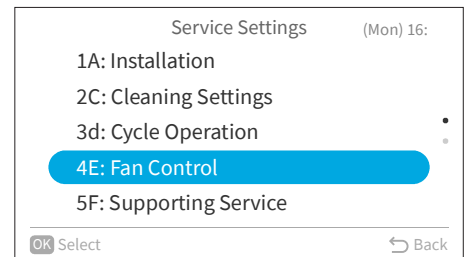


4. 4E: Fan Control

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

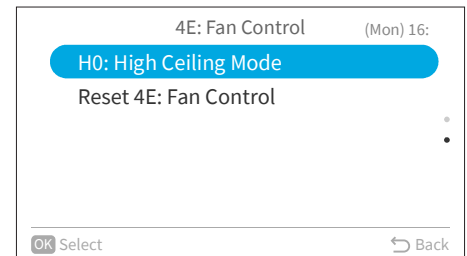


Step2. Select "4E: Fan Control" and press "OK".

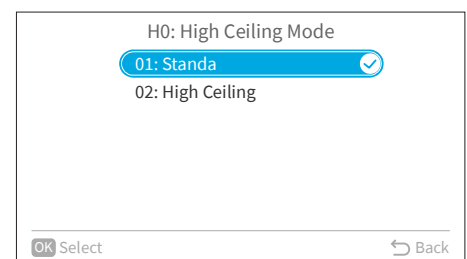


4.1 H0: High Ceiling Mode

Step1. Select "H0: High Ceiling Mode" and press "OK".

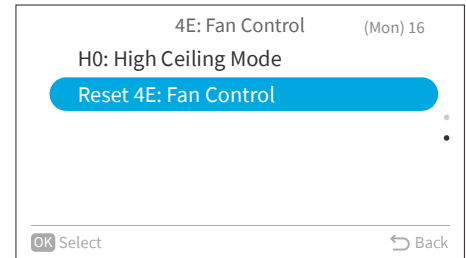


Step2. Press "^" or "v" to select the desired item and press "OK".

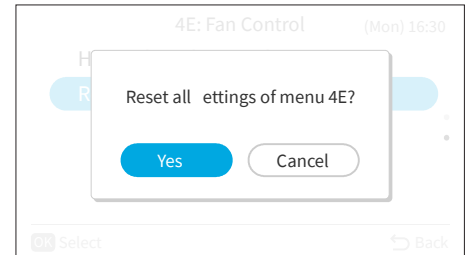


4.2 Reset 4E: Fan Control

Step1. Select "Reset 4E: Fan Control" and press "OK"

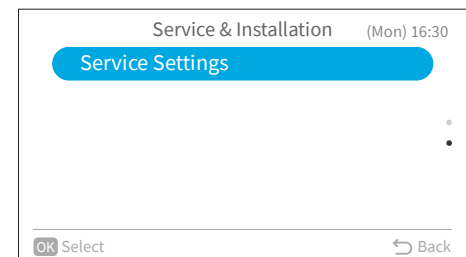


Step2. Select "Yes" and press "OK" to reset all settings of menu 4E.

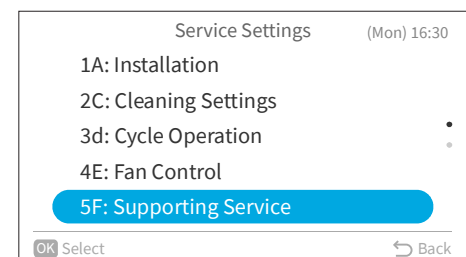


5. 5F: Supporting Service

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".

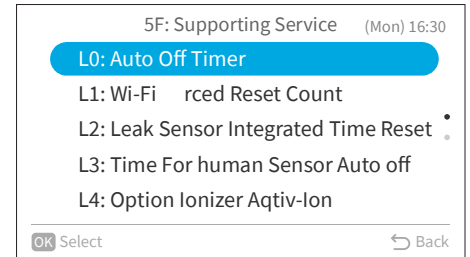


Step2. Select "5F: Supporting Service" and press "OK".

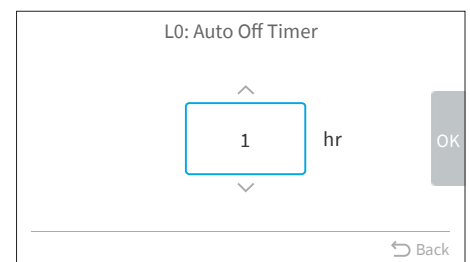


5.1 L0: Auto Off Timer

Step1. Select "L0: Auto Off Timer" and press "OK".

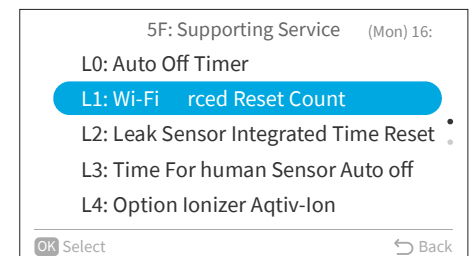


Step2. Press "^" or "v" to change the timer, then press ">" to select "OK" and press "OK".

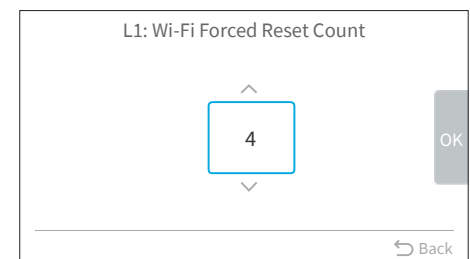


5.2 L1: Wi-Fi Forced Reset Count

Step1. Select "L1: Wi-Fi Forced Reset Count" and press "OK".

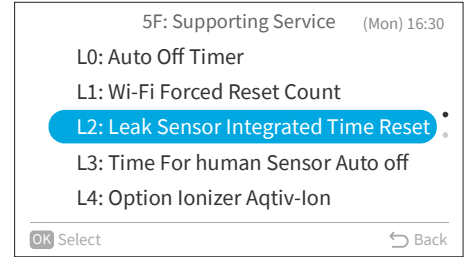


Step2. Press "^" or "v" to change the reset count, then press ">" to select "OK" and press "OK".

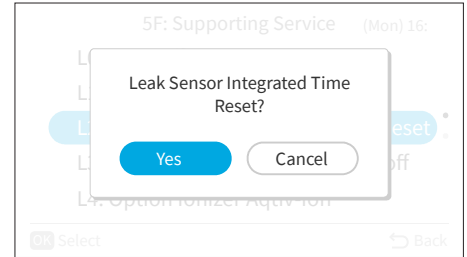


5.3 L2: Leak Sensor Integrated Time Reset

Step1. Select "L2: Leak Sensor Integrated Time Reset" and press "OK"

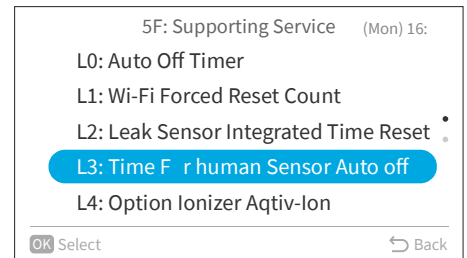


Step2. Select "Yes" and press "OK" to reset leak sensor integrated time.

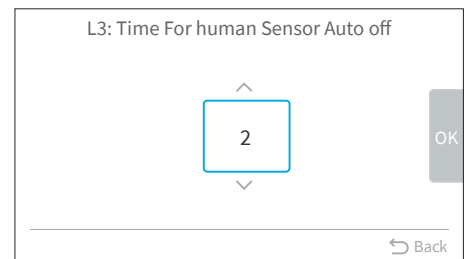


5.4 L3: Time For human Sensor Auto off

Step1. Select "L3: Time For human Sensor Auto off" and press "OK".

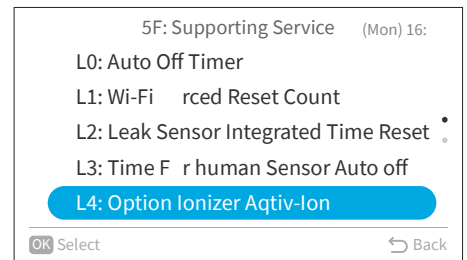


Step2. Press "^" or "v" to change the time, then press ">" to select "OK" and press "OK"

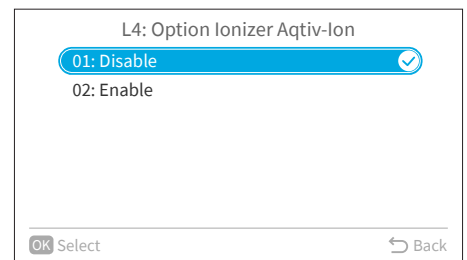


5.5 L4: Option Ionizer Aqtiv-Ion

Step1. Select "L4: Option Ionizer Aqtiv-Ion" and press "OK"



Step2. Press "^" or "v" to disable/enable option Ionizer Aqtiv-Ion and press "OK"

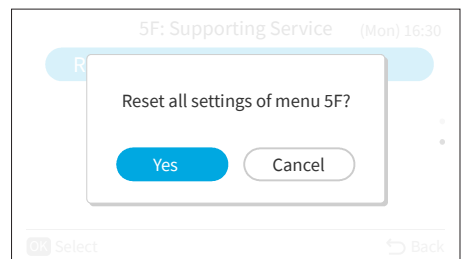


5.6 Reset 5F: Supporting Service

Step1. Select "Reset 5F: Supporting Service" and press "OK".

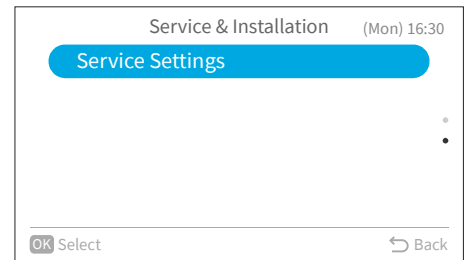


Step2. Select "Yes" and press "OK" to reset all settings of menu 5F.

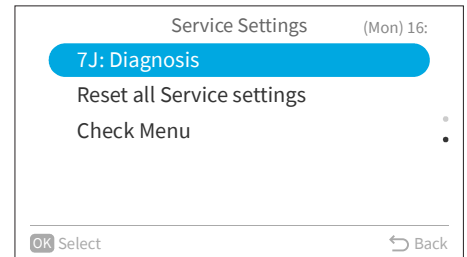


6. 7J: Diagnosis

Step1. select "Service Settings" on "Service & Installation" screen and press "OK".

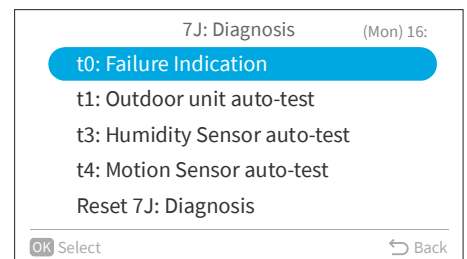


Step2. select "7J: Diagnosis" and press "OK".



6.1t0: Failure Indication

Step1. Select "t0: Failure Indication" and press "OK".



Step2. The failure indication screen is shown.

t0: Failure Indication	
Unit	Code
IDU	008
ODU	042
IDU	012
IDU	016
ODU	005

Back

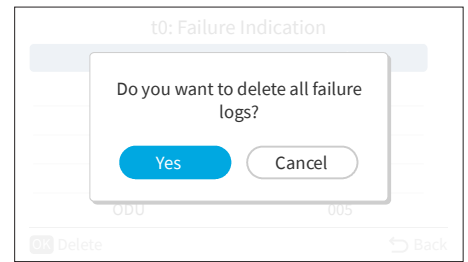
NOTE:

- Second time to go to t0 after indoor unit and wired remote controller is powered on: Failure indication screen with a "Delete".

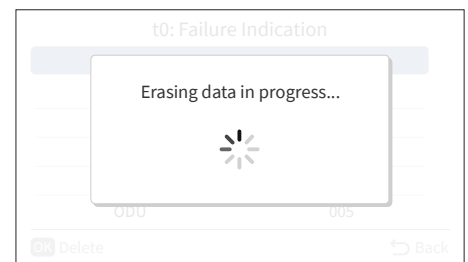
t0: Failure Indication	
Unit	Code
IDU	008
ODU	042
IDU	012
IDU	016
ODU	005

Delete Back

Step3. Press "OK" and a reminder shows up. Select "Yes" and press "OK" to delete all failure logs.

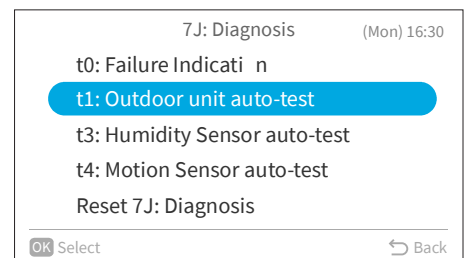


Step4. After completing erasing, it turns to home screen.

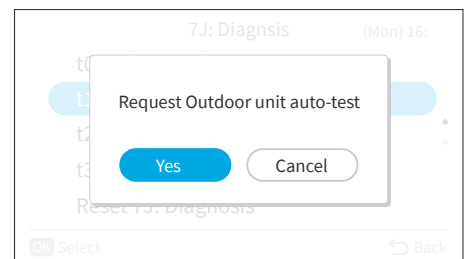


6.2t1: Outdoor unit auto-test

Step1. Select "t1: Outdoor unit auto-test" and press "OK"

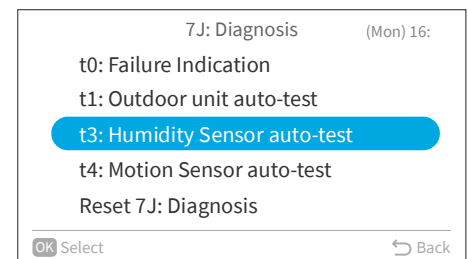


Step2. Select "Yes" and press "OK" to request outdoor unit auto-test.

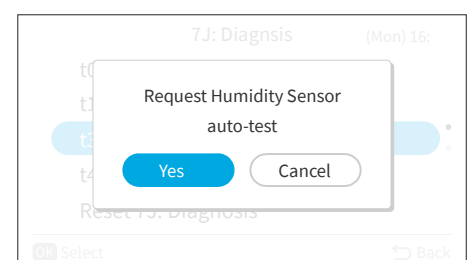


6.3t3: Humidity Sensor auto-test

Step1. Select "t3: Humidity Sensor auto-test" and press "OK".

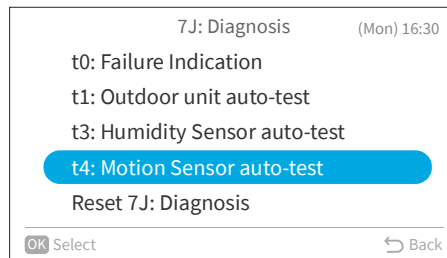


Step2. Select "Yes" and press "OK" to request humidity sensor auto-test.

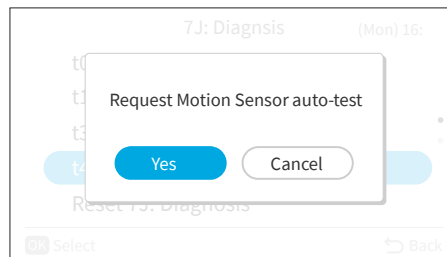


6.4 t4: Motion Sensor auto-test

Step1. elect "t4: Motion Sensor auto-test" and press "OK".

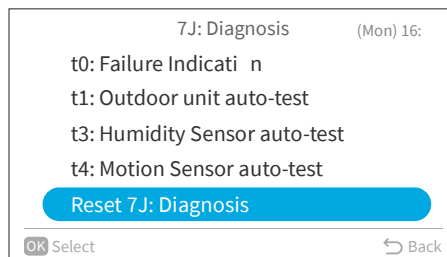


Step2. Select "Yes" and press "OK" to request motion sensor auto-test.

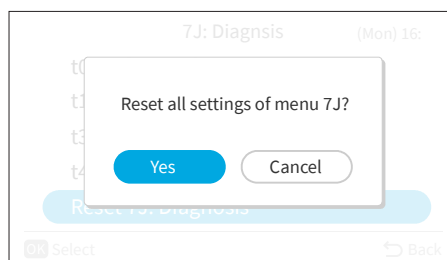


6.5 Reset 7J: Diagnosis

Step1. Select "Reset 7J: Diagnosis" and press "OK".

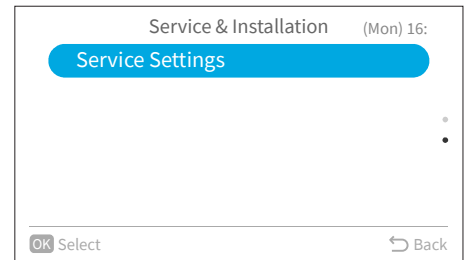


Step2. Select "Yes" and press "OK" to reset all settings of menu 7J.

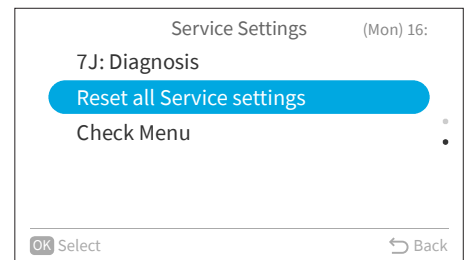


7. Reset All Service Settings

Step1. Select "Service Settings" on "Service & Installation" screen and press "OK".



Step2. Select "Reset all Service settings" and press "OK"

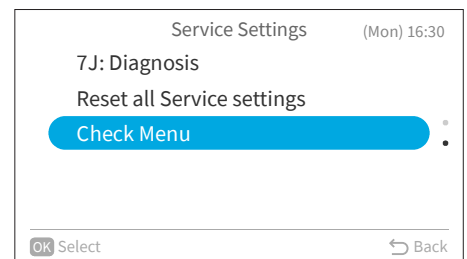


8. Check Menu

This menu displays various statuses of the air conditioner.

1. Enter Check Menu

Step1. Select "Check Menu" on the "Service Settings" screen and press "OK".



Each "Check Menu" item and its function is explained in the following table.

Item	Function
Remote controller auto-test	The wired remote controller checkout process begins and various settings initialize.
Alarm History Display *	Previous alarm history data including date, time, indoor unit number, and alarm code is displayed. (30 Max) The alarm history can be deleted.*

* Press "OK" while the alarm history is displayed, the confirmation screen for deleting the alarm history is displayed. Select "Yes" and press "OK" to delete the alarm history.

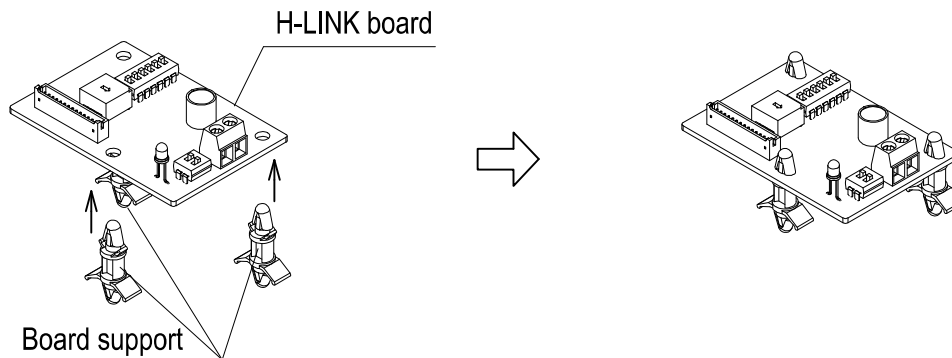
12.2 H-LINK Board (SPX-RAMHLK) Installation Manual

1.1 Check through H-LINK board accessories.

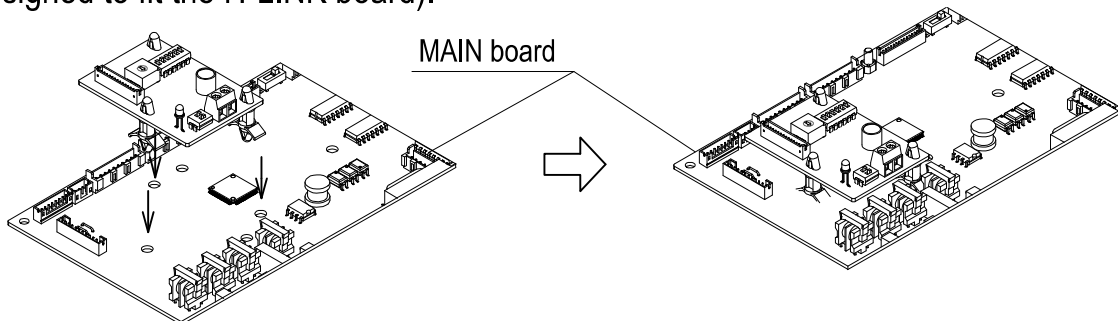
No	Part Name	Quantity
①	H-LINK board	1
②	Board support	3
③	14 pin cord	1
④	Installation manual	1

1.2 H-LINK board installation

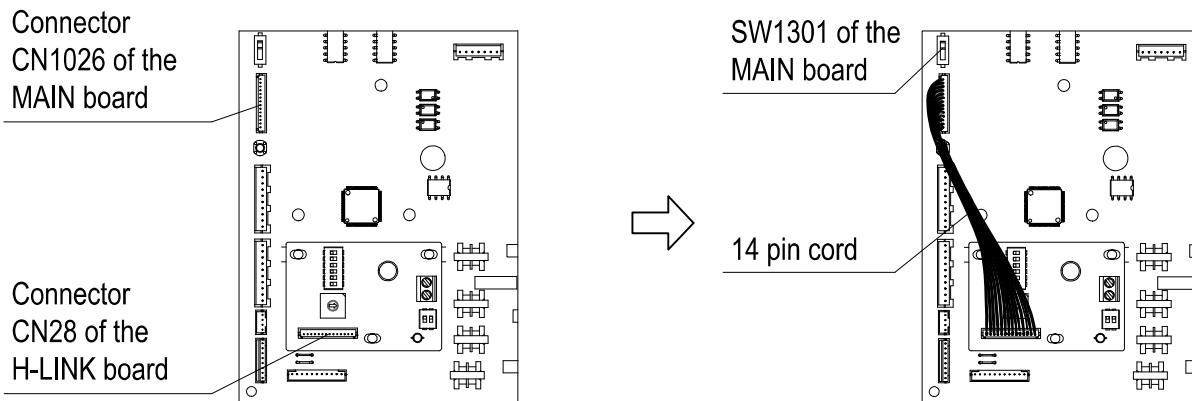
i. Assemble board support (3 pcs) to H-LINK board holes as following picture.



ii. Insert the H-LINK board into the MAIN board (please use 3 holes on MAIN board that designed to fit the H-LINK board).

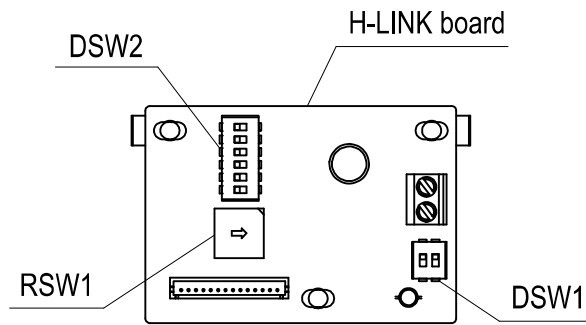


iii. Insert the 14 pin cord to the CN28 of the H-LINK board and CN1026 of the MAIN board.



iv. Set the SW1301 of the MAIN board to ON condition before start the H-LINK operation (default position from factory is OFF condition).

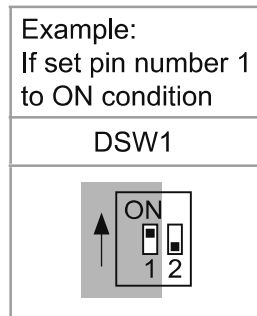
1.3 DIP switch setting.



i. DSW1 setting (terminal resistance setting).

Terminal resistance setting set by pin number 1 of DSW1.
(Default setting from factory is pin number 1 of DSW1 set to OFF condition).

Terminal resistance should be ON in only one position in whole H-LINK.
After checking terminal resistance setting of whole H-LINK, pin number 1 of DSW1 should be set properly.

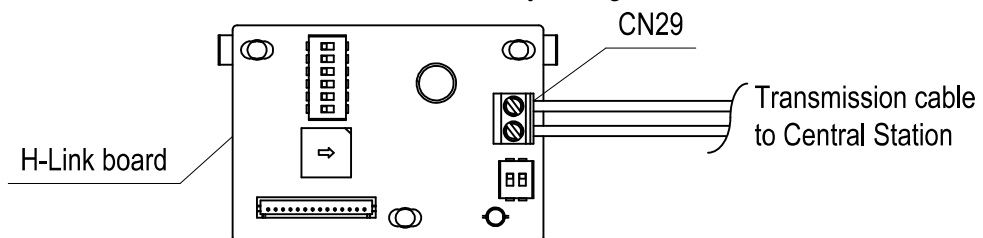


ii. DSW2 and RSW1 setting.

Refrigerant cycle number is set by DSW2 and RSW1.

DSW2 (tens digit)	RSW1 (ones digit)	Example: Setting cycle number to 15	
		DSW2	RSW1
Default setting from factory for DSW2 and RSW1 are set to OFF and 0 respectively.		Pin number 1 is ON	The set position is 5

1.4 Connect the H-LINK board to the Central Station by fixing the transmission cable at CN29.



The transmission cable used shall be as below.

- i. 2 cores cable (0.75mm² to 1.25mm²). Model : VCTF, VCT, CVV, MVVS, CVVS VVR, VVF.
- ii. 2 cores twist pair cable. Model : KPEV, KPEV-S.

Total length of the transmission cable shall be below than 1000m.

2 Error code during H-LINK operation.

- If there is any abnormality to the unit, error code will be displayed at Central Control Station.
- Error code displayed, its self-diagnosis and its suspected cause of the error shall refer to the table below.

Centralized device Alarm display code	RAC (IDU) Alarm display code	Self Diagnosis Display name	Internal and external classification	Display contents (Main cause)	Remarks
1A	0010	Air supply fan failure	IDU	Ventilation fan failure	Reserved ※2
1B	0011	Dirt sensor error	IDU	Ventilation fan failure	Reserved ※2
1C	0012	Cleaning error	IDU	Cleaning error	Reserved ※2
1D	0013	Peltier error	IDU	Peltier error	Reserved ※2
1E	0014	Human sensor error	IDU	-	Reserved ※2
1F	0015	Communication error by other products.	IDU	Communication error by other products.	
71	0001	Four-way valve operation failure	IDU	Four-way valve operation failure	
※1	0002	Forced cooling in operation	IDU	Forced cooling in operation	Be not a failure
73	0003	IDU communication circuit error	IDU	IDU communication circuit error	
75	0005	Power relay Contact Welding	IDU	Power relay Contact Welding	
76	0006	Error water level	IDU	Error water level	
※1	0007	Drain-pump test run	IDU	Drain-pump test run	Be not a failure
79	0009	Thermistor failure	IDU	Thermistor failure	
7A	000A	IDU fan failure	IDU	IDU fan failure	
7B	000B	Ionizer generator error	IDU	Ionizer generator error	Reserved ※2
7C	000C	ODU communication circuit error	IDU	ODU communication circuit error	
7D	000D	EEPROM read error	IDU	EEPROM read error	
7E	000E	HEX thermistor wire break short circuit	IDU	HEX thermistor wire break short circuit	Reserved ※2
7F	000F	Indoor temp. thermistor wire break short circuit	IDU	Indoor temp. thermistor wire break short circuit	Reserved ※2
82	0102	Stopping Ip cutting	ODU	Ip Cutting input Signaling detection	
83	0103	Abnormal low speed	ODU	Step-out by axial error condition to detection	Normal operation condition
84	0104	Switching failure	ODU	Step-out by axial error condition to detection	Synchronization, acceleration operation condition
85	0105	Over load shutdown	ODU	Less than min. revolution at over load	
86	0106	OH Stop	ODU	OH has reached the dead temperature.	
87	0107	Thermistor error	ODU	Thermistor burnout/short circuit	
88	0108	Communication between INV	ODU	Communication error between MCU	
89	0109	Incorrect connection	ODU	Connect RAC communication format IDU	Connect single IDU
8A	010A	Power supply VoltageError	ODU	DC voltage is out of limits	
8B	010B	Fan failure detection 1	ODU	Fan OVL stopped	
8C	010C	Fan failure detection 2	ODU	Ip cutting, step-out by axial error, etc.	
8D	010D	EEPROM error	ODU	Read error (ACK, checksum)	
8E	010E	Overvoltage error	ODU	DC voltage is out of limits	Starting
8F	010F	Circuit error	ODU	ACT circuitry, Is/Vs error, etc.	
A0	0128	Valve error	ODU	Yutampo multi valves error	
A1	0029	Leakage of gas (generated IDU)	IDU	Gas-leak Fix	
A2	002A	Gas sensor failure (IDU generated)	IDU	Communication error with gas sensor, etc.	
A4	0129	Gas leak (notification receiving equipment)	ODU	When an A1~A2 occurs, returned to except of the leak generating unit by notifying the ODU.	
A5	012A	Gas sensor failure (notification receiving equipment)	ODU		

• For more information on alarms, see IDU/ODU self diagnosis.

• When an alarm is sent from RAC IDU, the alarm is cleared by RAC IDU.

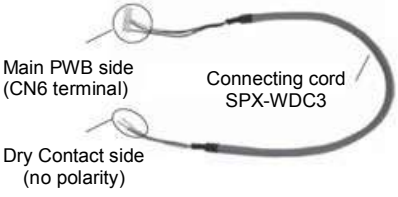
The alarm cannot be cleared from the central device. (Fit to the operating specs of IDU ≠ RAC adapter)

※1: An alarm code is sent from IDU, but it is not notified to the central device. (Fit to the operating specs of IDU ≠ RAC adapter)

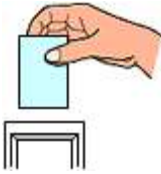
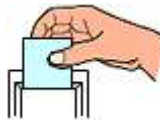




※2: It is not sent from IDU.

12.3. DRY CONTACT (SPX-WDC3) APPLICATION

The dry contact system enables the operation of the air conditioner indoor unit to be controlled by using external dry contacts (with non voltage) such as card-key controller or window for facilities such as hotels.

Optional Connecting cord Accessory SPX-WDC3		Model	DIP SW Label	CN#
	SPX WDC3	RAK-DJ07QHAA	DSW1	CN6
		RAK-DJ(09-24)RHAA		
		RAK-GJ(07-24)QHAA		
		RAF-FJ(07-18)QHAA		
		RAI-GJ(07-24)QHAA		
		RAD-GJ(07-24)QHAA		
		-		
-				
-				

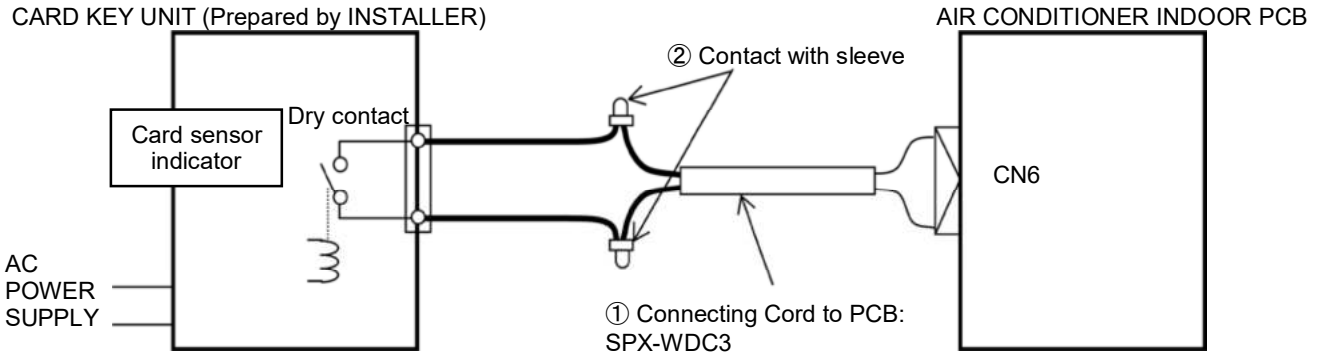
[1] CHECK DRY CONTACT OF CARD KEY UNIT

	AIR CONDITIONER Standby	AIR CONDITIONER Operating
	REMOVE	INSERT
CARD KEY (Door Switch)		
Contact type A	OPEN 	CLOSE 
Contact type B	CLOSE 	OPEN 

After all connection has been done as below diagram, ON the breaker and push ON button of wireless remote controller or wired remote controller to operate the air conditioner unit.

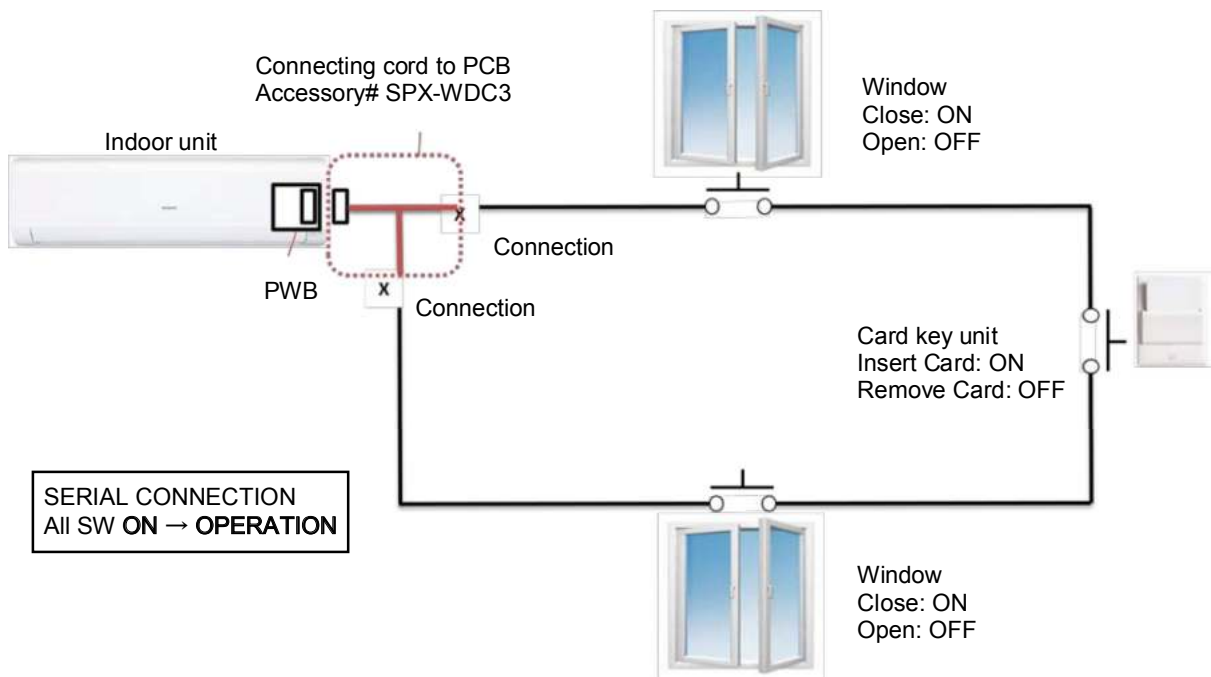
- When the CARD KEY is in insert condition, the air conditioner operation is allowable by remote controller.
- When the dry contact switch on the Card Key Unit is open (refer to diagram below for contact type a), the unit stops to operate (it takes 10 seconds to stop the unit operation after the dry contact switch on the card key turns off) and vice versa.
- When the card key is removed from the Card Key Unit, the wireless remote controller cannot be used.
- When the card key is removed from the Card Key Unit, the wired remote controller LCD display is activated; however it has no control over the unit.
- The suitable accessory Connecting Cord (accessory code#: SPX-WDC3) need to be used to connect the Card Key Unit's dry contact switch to the connector on the control board of the indoor unit. Please refer to Table 1 to select suitable accessory code# for the concerning indoor model.

Example of wiring connection to Card Key Unit will be as below (reference only)

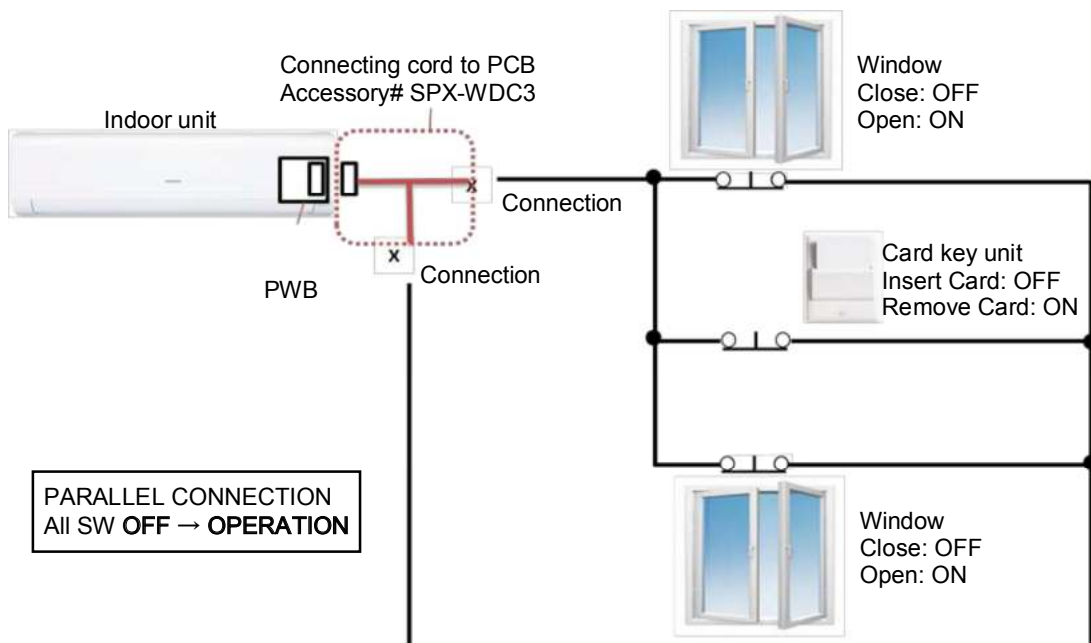


• CONNECTION EXAMPLE

i. HHRC for Dry Contact Type A



ii. HHRC for Dry Contact Type B



Please refer to the actual manual supplied with the optional connecting cords SPX-WDC3 for more details.

12.4 REMOTE SENSOR - SPX-RTH1

This remote sensor is applicable to Duct type indoor unit for Hitachi split system air conditioner.

12.4.1 SELECTION OF INSTALLATION POSITION

The thermistor for detecting room temperature is installed inside the remote sensor

The installation position of the remote sensor should be determined in consideration with the following conditions.

- Where the average room temperature can be detected.
- Where is not exposed to the sun
- Where the heat source is not located near the remote sensor.
- Where the discharge air from the air conditioner does not blow directly.
- Where is not affected by the outdoor air when opening / closing the door, etc

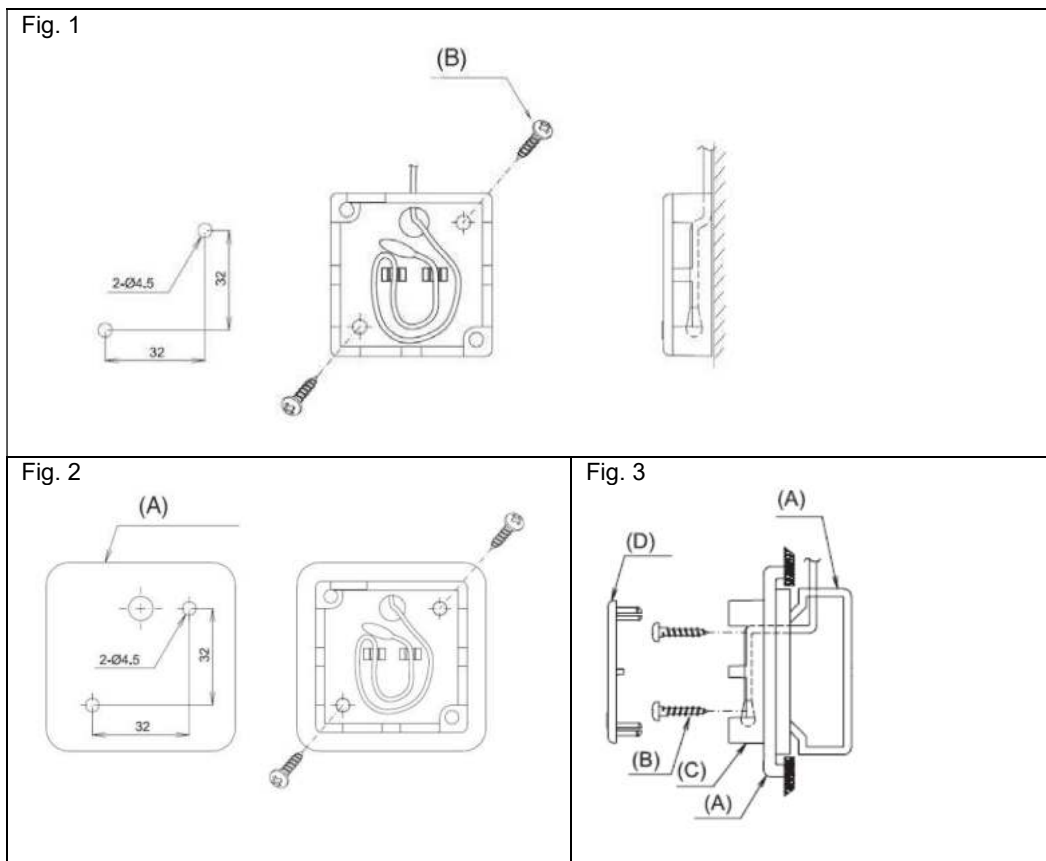
12.4.2 INSTALLATION PROCEDURE

▪ In case of mounting onto the wall (Fig.1)

- Make the wiring on the sensor box, and let the wires for sensor through the box slot.
- Fix the sensor box onto the wall with 2 screws (B)
- In case that the sensor box can not be fixed onto the wall with screws, fix it onto the wall by using the double sided adhesive tapes, etc.

▪ In case of mounting onto Electrical Switch box (Fig. 2 and 3)

- Make the holes for fixing sensor box on the Switch Box Cover (A) (field-supplied) as shown on the Fig. 3 and fix the sensor box to the plate with screws (B)
- Pay attention that the hole for air intake on the sensor box (C) may not be shut.



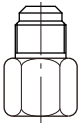
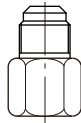
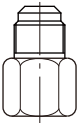
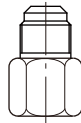


12.4.3 WIRING PROCEDURES

- Remove the original room thermistor from CN1 at the indoor printed circuit board.
- Connect the cord (15m) of the remote sensor to CN1 (Black) of the indoor printed circuit board.

Please refer to the actual manual supplied with the SPX- RTH1 for more details.

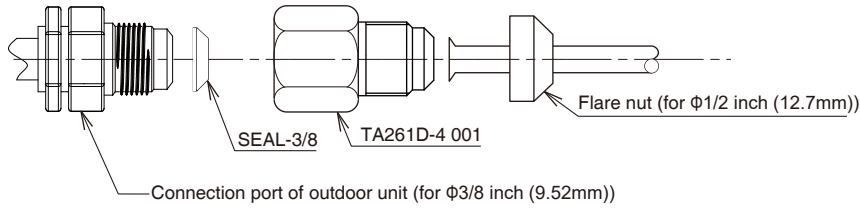
13.1. Instruction of adaptors

- Please find provided adaptors from the list below:-
Size and quantity provided may vary according to model of unit use.

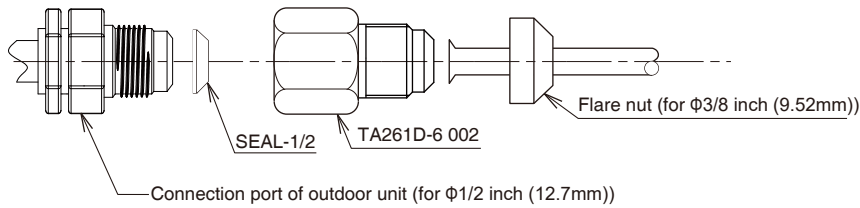
TA261D-4-001	TA261D-6-002	TA261D-7-003	ADAPTOR3-5	SEAL-3/8	SEAL-1/2
Adaptor	Adaptor	Adaptor	Adaptor	Seal	Seal
3/8 to 1/2	1/2 to 3/8	1/2 to 5/8	3/8 to 5/8	3/8	1/2
					

- Use the adaptors supplied with the unit as described below.

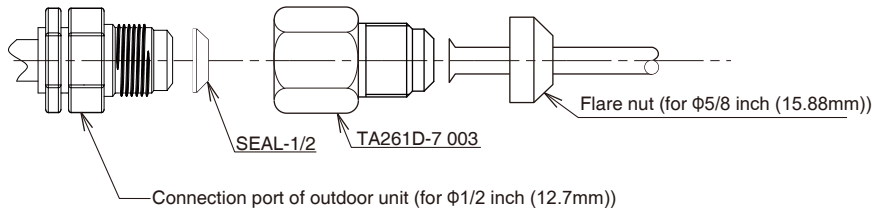
- (1) When connecting a pipe of $\Phi 1/2$ inch (12.7mm) to a gas pipe connection port for $\Phi 3/8$ inch (9.52mm), using part TA261D-4-001 and SEAL-3/8 to connect the connection port and flare nut as shown below.



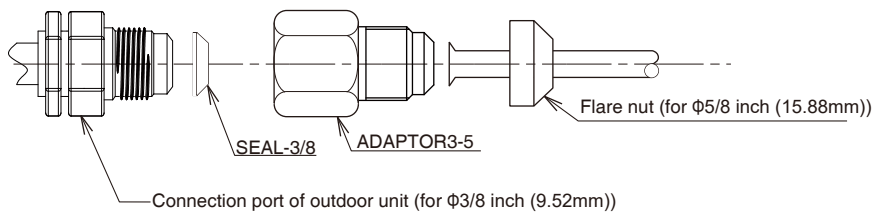
- (2) When connecting a pipe of $\Phi 3/8$ inch (9.52mm) to a gas pipe connection port for $\Phi 1/2$ inch (12.7mm), using part TA261D-6-002 and SEAL-1/2 to connect the connection port and flare nut as shown below.



- (3) When connecting a pipe of $\Phi 5/8$ inch (15.88mm) to a gas pipe connection port for $\Phi 1/2$ inch (12.7mm), using part TA261D-7-003 and SEAL-1/2 to connect the connection port and flare nut as shown below.



- (4) When connecting a pipe of $\Phi 5/8$ inch (15.88mm) to a gas pipe connection port for $\Phi 3/8$ inch (9.52mm), using part ADAPTOR3-5 and SEAL-3/8 to connect the connection port and flare nut as shown below.



CAUTION

- Make sure to attach the seal when using the adaptors.
- Apply a coat of refrigeration oil to the threaded connection port of the outdoor unit where the flare nut comes in.

Piping size	Flare nut tightening torque	Adaptors	Tightening torque
O.D. Φ 3/8 inch (9.52mm)	24-31ft • lbf (33-42N•m)	TA261D-4-001 & ADAPTOR3-5	22-30ft • lbf (30-40N•m)
O.D. Φ 1/2 inch (12.7mm)	37-46ft • lbf (50-62N•m)	TA261D-6-002	30-37ft • lbf (40-50N•m)
O.D. Φ 5/8 inch (15.88mm)	46-57ft • lbf (62-77N•m)	TA261D-7-003	30-37ft • lbf (40-50N•m)

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