

VRF

Technical Data Book

Big Duct for Europe (R410A, 50Hz, HP)

SAMSUNG

Nomenclature

Indoor Units

Model Names

AM

(1)

180

(2)

J

(3)

N

(4)

H

(5)

F

(6)

K

(7)

H

(8)

/

EU

Buyer

(1) Classification

AC	SINGLE
AM	VRF

(2) Capacity

x 1/10 kW (3 digits)

(3) Version

F	2013
H	2014
J	2015

(4) Product Type

N	Indoor Unit
X	Outdoor Unit

(5) Product Notation

1	1Way Cassette
2	2Way Cassette
N	4Way Cassette S (600 x 600)
4	4Way Cassette S
L	LSP Duct (Slim Duct)
M	MSP Duct
H	HSP Duct
C	Ceiling
T	Neo Forte
E	OAP Duct

(6) Feature

D	DELUXE
F	FLAGSHIP
P	Premium
G(EHS)	Cascade (EEV)

(7) Rating Voltage

C	1Ø, 208~230V, 60Hz
E	1Ø, 220~240V, 50Hz
G	3Ø, 380~415V, 50Hz
K	1Ø, 220~240V, 50/60Hz
N	3Ø, 380~415V, 50/60Hz

(8) Mode

C	Cooling Only(R410A)
H	Heat Pump(R410A)
D	Cooling Only(R22)
E	Heat Pump(R22)

HSP Duct

1 Specifications

2 Capacity table

3 Dimensional drawing

4 Electrical wiring diagram

5 Sound pressure level

6 Sound power level

7 Recommended operation range

1 Specifications

HSP Duct

Type			HSP Duct		HSP Duct	
Model			AM180JNHFKH/EU		AM224JNHFKH/EU	
Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50	
Mode			-	HP/HR	HP/HR	
Performance	Capacity (Nominal)	Cooling	kW	18.00	22.40	
			Btu/h	61,400	76,400	
		Heating	kW	20.00	25.00	
			Btu/h	68,200	85,300	
Power	Power Input (Nominal)	Cooling	W	340.00	530.00	
		Heating		340.00	530.00	
	Current Input (Nominal)	Cooling	A	1.90	2.90	
		Heating		1.90	2.90	
Fan	Motor	Type	-	Sirocco	Sirocco	
		Output x n	w	630 x 1	630 x 1	
	Air Flow Rate	H/M/L (UL)	CMM	58.00 / 50.00 / 43.00	72.00 / 61.00 / 50.00	
			l/s	966.67 / 833.33 / 716.67	1,200.00 / 1,016.67 / 833.33	
	External Pressure	Min/Std/Max	mmAq	5.00 / 7.34 / 20.00	5.00 / 7.34 / 20.00	
Pa			49.00 / 71.93 / 196.00	49.00 / 71.93 / 196.00		
Piping Connections	Liquid Pipe		Ø, mm	9.52	9.52	
			Ø, inch	3/8"	3/8"	
	Gas Pipe		Ø, mm	19.05	19.05	
			Ø, inch	3/4"	3/4"	
	Drain Pipe		Ø, mm	VP25 (OD 25, ID 20)	VP25 (OD 25, ID 20)	
Field Wiring	Power Source Wire		mm ²	-	-	
	Transmission Cable		mm ²	0.75 - 1.50	0.75 - 1.50	
Refrigerant	Type	-	-	R410A	R410A	
	Control Method	-	-	EEV(O)	EEV(O)	
Sound	Pressure	High / Mid / Low	dB(A)	43.0 / 39.0 / 35.0	44.0 / 40.0 / 36.0	
	Power	Cooling		80.0	81.0	
Dimension	Net Weight		kg	82.50	82.50	
	Shipping Weight		kg	92.00	92.00	
	Net Dimensions (WxHxD)		mm	1,350 x 450 x 910	1,350 x 450 x 910	
	Shipping Dimensions (WxHxD)		mm	1,612 x 519 x 984	1,612 x 519 x 984	
Panel Size	Panel model		-	-	-	
	Panel Net Weight		kg	-	-	
	Shipping Weight		kg	-	-	
	Net Dimensions (WxHxD)		mm	-	-	
	Shipping Dimensions (WxHxD)		mm	-	-	
Additional Accessories	Drain Pump	Drain Pump	- / Model	MDP-G075SQ	MDP-G075SQ	
		Max. lifting Height / Displacement	mm/liter/h	-	-	
	Air Filter		-	-	-	

* Specifications may be subject to change without prior notice for product improvement.

*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.

2 Capacity table

HSP Duct

Cooling

TC : Total Capacity, SHC : Sensible Heat Capacity

Model	Outdoor temperature (°C, DB)	Indoor temperature (°C, WB)													
		14.0		16.0		18.0		19.0		20.0		22.0		24.0	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
18.00	10	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	22.31	12.94
	12	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	22.31	12.94
	14	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	22.31	12.94
	16	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	22.31	12.94
	18	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	22.21	12.88
	20	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.90	12.70
	21	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.92	12.71
	23	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.61	12.53
	25	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	27	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	29	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	31	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	33	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	35	12.76	10.21	15.02	11.42	17.05	12.79	18.00	13.50	19.10	12.41	21.06	12.64	21.54	12.49
	37	12.58	10.06	14.81	11.26	16.90	12.68	18.00	13.50	19.00	12.35	20.77	12.46	21.23	12.31
	39	12.42	9.94	14.62	11.11	16.90	12.68	17.90	13.42	19.00	12.35	20.52	12.31	20.96	12.16
	42	12.19	9.75	14.35	10.91	16.59	12.45	17.57	13.18	18.66	12.13	20.15	12.09	20.57	11.93
	44	12.01	9.61	14.14	10.75	16.35	12.27	17.32	12.99	18.39	11.95	19.86	11.92	20.27	11.75
	46	11.78	9.43	13.87	10.54	16.04	12.03	16.99	12.75	18.05	11.73	19.49	11.69	19.87	11.53
	22.40	10	15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.53
12		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.53	15.69
14		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.53	15.69
16		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.53	15.69
18		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.53	15.69
20		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.24	15.53
21		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	27.19	15.50
23		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
25		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
27		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
29		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
31		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
33		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
35		15.96	11.97	18.75	13.68	21.24	15.29	22.40	15.68	23.79	16.18	25.99	15.85	26.77	15.26
37		15.74	11.80	18.48	13.49	21.01	15.13	22.40	15.68	23.69	16.11	25.63	15.63	26.39	15.04
39		15.54	11.66	18.25	13.32	21.01	15.13	22.30	15.61	23.54	16.00	25.32	15.44	26.06	14.85
42	15.26	11.44	17.92	13.08	20.63	14.85	21.90	15.33	23.12	15.72	24.86	15.17	25.57	14.58	
44	15.04	11.28	17.66	12.89	20.34	14.64	21.59	15.11	22.79	15.50	24.51	14.95	25.20	14.36	
46	14.76	11.07	17.32	12.65	19.95	14.37	21.19	14.83	22.37	15.21	24.06	14.67	24.71	14.09	

2 Capacity table

HSP Duct

Heating

TC : Total Capacity

Model	Outdoor temperature (°C)		Indoor temperature (°C, DB)				
			16.0	18.0	20.0	22.0	24.0
	DB	WB	TC kW	TC kW	TC kW	TC kW	TC kW
18.00	-20	-21	16.32	15.73	14.90	14.20	13.67
	-17	-18	16.69	16.09	15.23	14.87	14.72
	-15	-16	17.26	16.64	15.75	15.41	15.19
	-12	-13	18.35	17.68	16.74	16.23	16.09
	-10	-11	19.62	18.90	17.89	17.13	16.92
	-7	-8	20.16	19.42	18.38	17.83	17.59
	-5	-6	20.74	19.98	18.90	18.51	18.07
	-3	-4	21.20	20.42	19.32	19.15	18.45
	0	-1	21.67	20.98	19.75	19.34	18.84
	3	2	22.11	21.36	20.00	19.40	18.81
	5	4	22.35	21.36	20.00	19.40	18.81
	7	6	22.69	21.36	20.00	19.40	18.81
	9	8	22.69	21.36	20.00	19.40	18.81
	11	10	22.69	21.36	20.00	19.40	18.81
	13	12	22.69	21.36	20.00	19.40	18.81
15	14	22.69	21.36	20.00	19.40	18.81	
22.40	-20	-21	20.33	19.58	18.52	17.63	16.96
	-17	-18	20.80	20.03	18.94	18.42	18.10
	-15	-16	21.52	20.73	19.60	19.11	18.70
	-12	-13	22.90	22.05	20.85	20.17	19.84
	-10	-11	24.51	23.60	22.32	21.40	21.10
	-7	-8	25.20	24.26	22.94	22.25	21.75
	-5	-6	25.94	24.97	23.61	23.10	22.36
	-3	-4	26.53	25.54	24.14	23.73	22.84
	0	-1	27.12	26.23	24.68	24.17	23.34
	3	2	27.68	26.69	25.00	24.17	23.48
	5	4	27.93	26.69	25.00	24.17	23.48
	7	6	28.23	26.69	25.00	24.17	23.48
	9	8	28.23	26.69	25.00	24.17	23.48
	11	10	28.23	26.69	25.00	24.17	23.48
	13	12	28.23	26.69	25.00	24.17	23.48
15	14	28.23	26.69	25.00	24.17	23.48	

3 Dimensional drawing

HSP Duct

AM180JNHFKH/EU, AM224JNHFKH/EU

Units : mm / inches

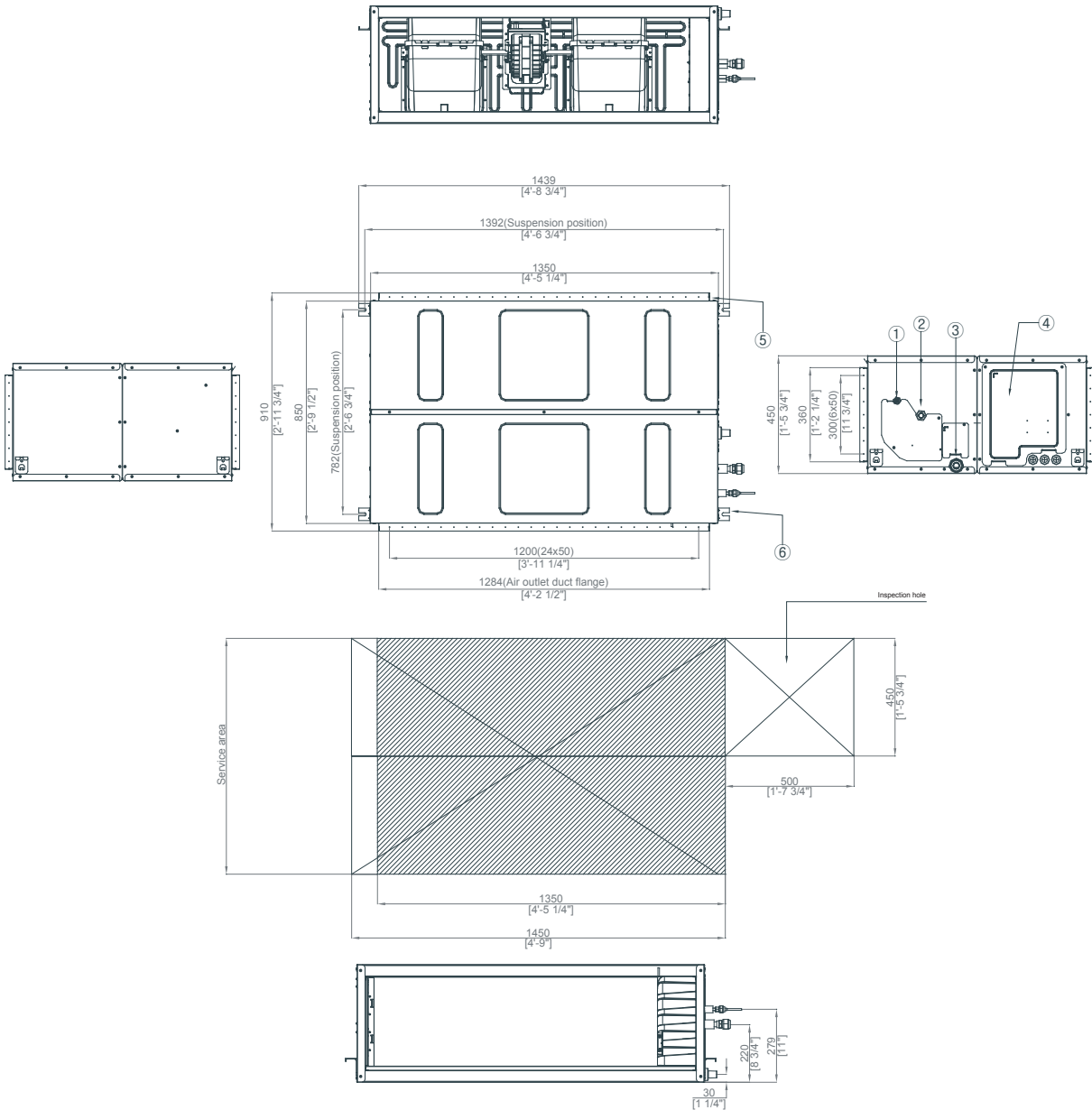


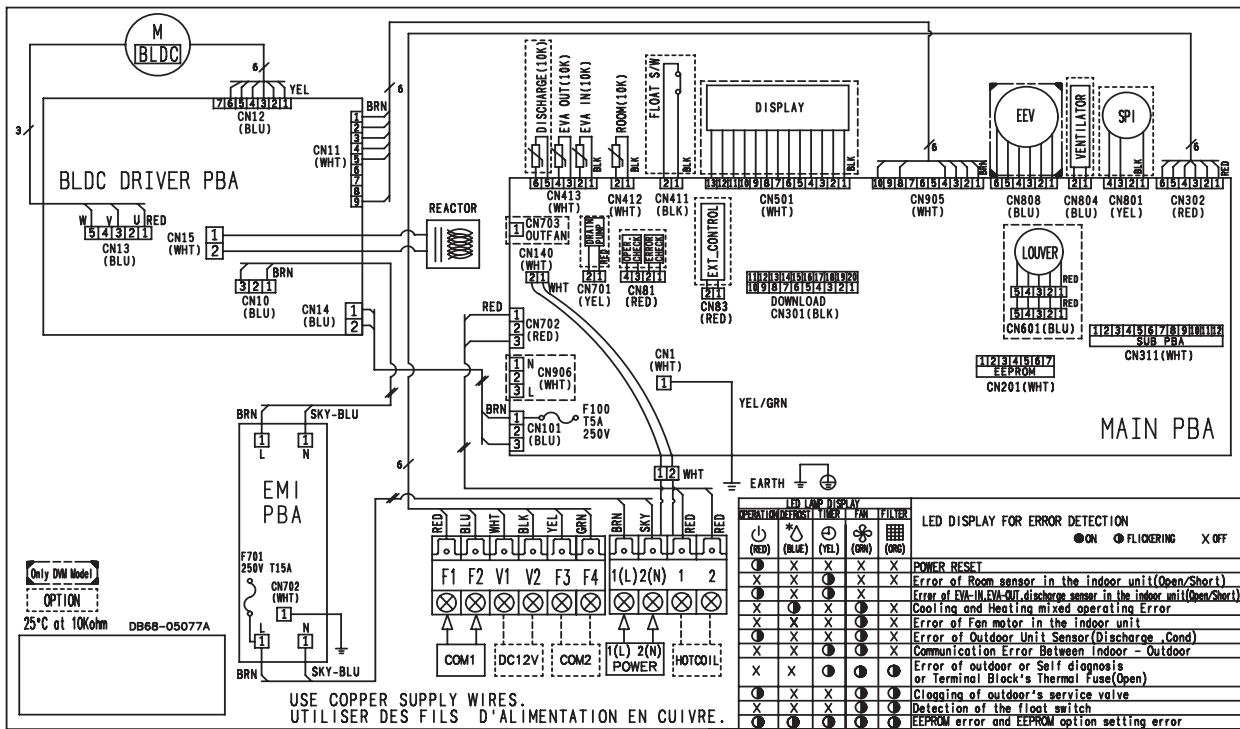
Table of descriptions

1	Liquid pipe connection	7	
2	Gas pipe connection	8	
3	Drain pipe connection	9	
4	Power supply connection	10	
5	Air discharge flange	11	
6	Hook	12	

4 Electrical wiring diagram

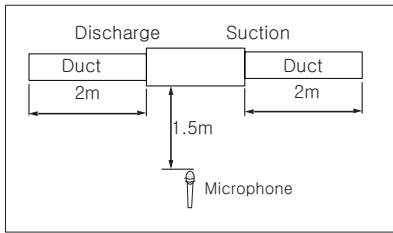
HSP Duct

AM180JNHFKH/EU, AM224JNHFKH/EU



5 Sound pressure level

HSP Duct



Unit: dB(A)

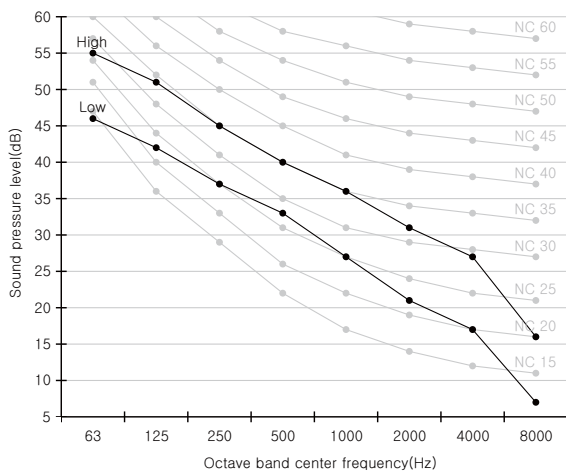
Model	High	Low
AM180JNHFKH/EU	43.0	35.0
AM224JNHFKH/EU	44.0	36.0

Note

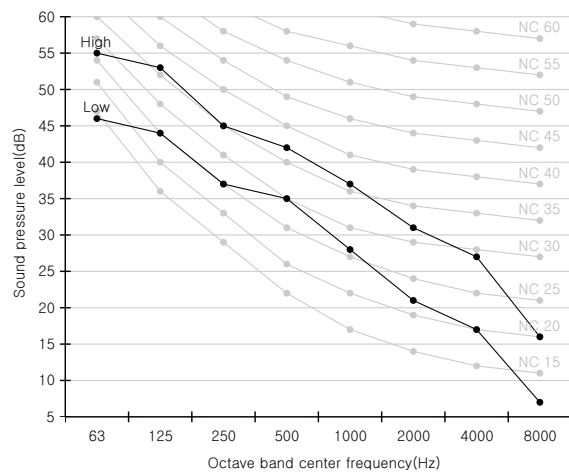
- These operation values were obtained in an anechoic room.
- Sound pressure level will vary depending on a factors such as the construction of the particular room where the equipment is installed.

NC curve

1) AM180JNHFKH/EU



2) AM224JNHFKH/EU



6 Sound power level

HSP Duct

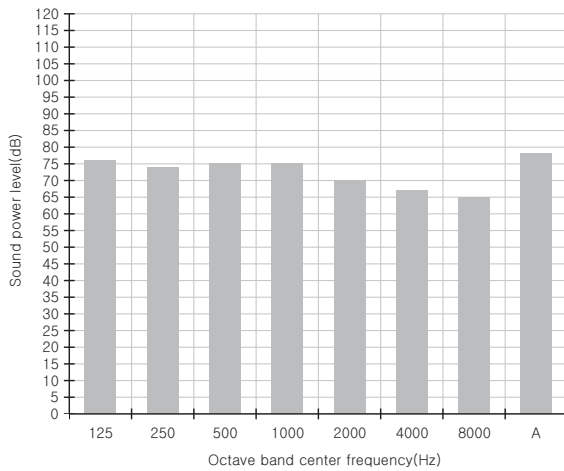
Note

- dBA = A-Weighted sound power level.
- Reference power : 1pW
- Measured according to ISO 3741.

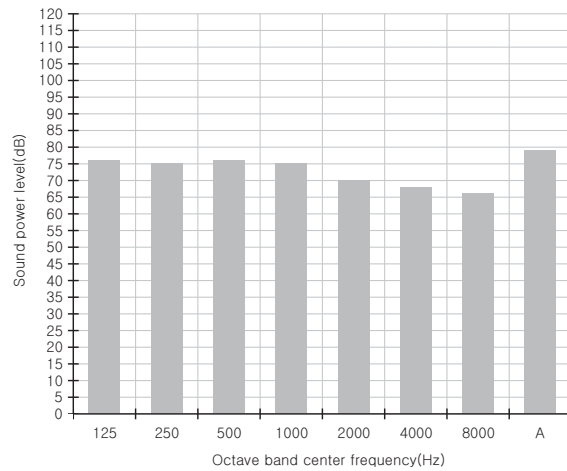
Unit: dB(A)

Model	Power
AM180JNHFKH/EU	80.0
AM224JNHFKH/EU	81.0

1)AM180JNHFKH/EU



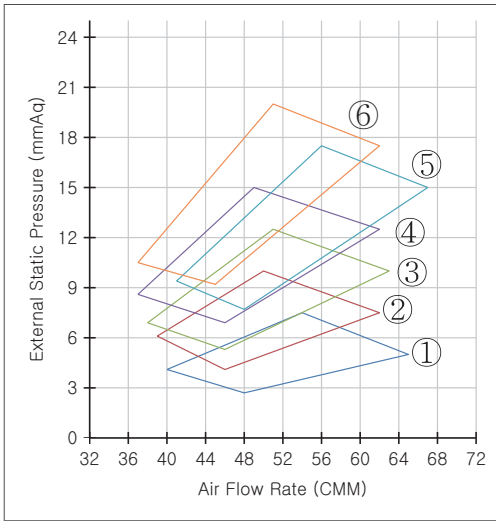
2)AM224JNHFKH/EU



7 Recommended operation range

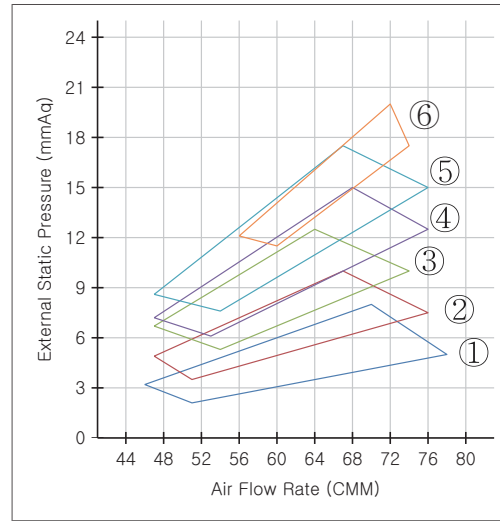
HSP Duct

1) AM180JNHFKH/EU



External Static Pressure (mmAq)	Option Code
① $5 \leq SP < 7.5$	012074-1C5080-20B4B4-331110
② $7.5 \leq SP < 10$	012074-1C50A1-20B4B4-331110
③ $10 \leq SP < 12.5$	012074-1C50D3-20B4B4-331110
④ $12.5 \leq SP < 15$	012074-1C50F5-20B4B4-331110
⑤ $15 \leq SP < 17.5$	012074-1C5437-20B4B4-331110
⑥ $17.5 \leq SP \leq 20$	012074-1C5448-20B4B4-331110

2) AM224JNHFKH/EU



External Static Pressure (mmAq)	Option Code
① $5 \leq SP < 7.5$	012074-1C50C0-20E0E0-331110
② $7.5 \leq SP < 10$	012074-1C50E3-20E0E0-331110
③ $10 \leq SP < 12.5$	012074-1C50F5-20E0E0-331110
④ $12.5 \leq SP < 15$	012074-1C5436-20E0E0-331110
⑤ $15 \leq SP < 17.5$	012074-1C5458-20E0E0-331110
⑥ $17.5 \leq SP \leq 20$	012074-1C548E-20E0E0-331110

Note

- Adjust option code according to the actual installation condition (external static pressure).
- The graphs display the available external static pressure range of installed indoor units. Therefore, they do not reflect the actual change of external static pressure and airflow rate according to adjusted airflow (High-Mid-Low) of installed indoor units.



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