DVM Technical Data Book

DVM PLUS IV Indoor Unit

SAMSUNG

CONTENTS

1. Specification

Model					ND200HHXEA	ND220HHXEA	ND280HHXEA
Power Supply				Φ, #, V, Hz	1, 2, 220~240, 50	1, 2, 220~240, 50	1, 2, 220~240, 50
Mode				-	HP / HR	HP / HR	HP / HR
	Capacity (Nominal)	Cooling [1]		kW	20.0	22.4	28.0
		Heating [2]		kW	22.4	25	31.5
Power	Power Input (Nominal)	Cooling [1]		W	0.40	0.53	0.79
		Heating [2]			0.40	0.53	0.79
	Current Input (Nominal)	Cooling [1]		A	3.3	3.8	5.9
		Heating [2]			3.3	3.8	5.9
Fan	Motor	Type		-	BLDC	BLDC	BLDC
		Output		W	400	400	400
		Number of unit		EA	1	1	1
	Air Flow Rate	H/M/L (UL)		CMM	52 / 47 / 42	58 / 52/ 47	72 / 65 / 58
	External Pressure	Min / Std / Max		mmAq	5 / 15 / 25	5 / 15 / 25	5 / 15 / 28
Option Code				-	015A171500D7-200000300000	015A171600E8-200000300000	015A1717025B-200000300000
Piping Connections	Liquid Pipe			Φ,mm	9.52	9.52	9.52
				Φ, inch	3/8	3/8	3/8
	Gas Pipe			Φ,mm	19.05	19.05	22.22
				Φ, inch	3/4	3/4	7/8
	Drain Pipe			Φ,mm	VP 25(OD32, ID25)	VP 25(OD32, ID25)	VP 25(OD32, ID25)
Field Wiring	Power Source Wire	Below 20 m / over 20 m		mm^2	CV 1.5 ~ 2.5	CV 1.5 ~ 2.5	CV 1.5 ~ 2.5
	Transmission Cable			mm^2	VCTF 0.75~1.5	VCTF 0.75~1.5	VCTF 0.75~1.5
Refrigerant	Type			-	R410A	R410A	R410A
	Control Method			-	EEV	EEV	EEV
Sound	Sound Pressure	High / Low		dBA	46 / 43	47 / 44	48 /45
Dimensions	Net Weight			kg	93	95	95
	Shipping Weight			kg	103	105	105
	Net Dimensions (W×H×D)			mm	1,240 x 470 x 1,040	1,240 x 470 x 1,040	1,240 x 470 x 1,040
	Shipping Dimensions (W×H×D)			mm	1,507 x 558 x 1,155	1,507 x 558 x 1,155	1,507 x 558 x 1,155
Panel Size	Panel model			-			
	Panel Net Weight			kg			
	Shipping Weight			kg			
	Net Dimensions (W×H×D)			mm			
	Shipping Dimensions (W×H×D)			mm			
Additional Accessories	Drain pump	Drain pump		- / Model	MDP-N047SNC1	MDP-N047SNC1	MDP-N047SNC1
		Max. lifting Height / Displacement		mm / liter/h	470 / 24	470 / 24	470 / 24
	Air Filter			-			

2. Capacity Table

1) Cooling

TC : Total Capaicty(kW), SHC: Sensible Heat Capacity(kW)

Model	Outdoor temperature (℃,DB)	Indoor temperature (℃,WB)													
		20 (℃, DB)		23 (℃, DB)		26 (℃, DB)		27 (℃, DB)		28 (℃, DB)		30 (℃, DB)		32 (℃, DB)	
		14 (℃, WB)		16 (℃, WB)		18 (℃, WB)		19 (℃, WB)		20 (℃, WB)		22 (℃, WB)		24 (℃, WB)	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
ND200	10 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.8	22.7	15.8	24.1	16.1
	12 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.1
	14 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	15.9
	16 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.1
	18 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.0
	20 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.1
	21 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.1
	23 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	16.0	24.1	16.1
	25 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.2
	27 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.2
	29 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	15.9	24.1	16.2
	31 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	16.0	24.1	16.2
	33 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.9	22.7	16.2	24.1	16.2
	35 ℃	14.1	12.5	16.7	14.0	19.0	15.1	20.0	15.4	21.0	15.8	22.7	16.2	24.1	16.3
	37 ℃	13.9	12.3	16.4	13.8	18.7	14.8	19.7	15.2	20.7	15.7	22.3	15.9	23.7	16.0
	39 ℃	13.7	12.2	16.2	13.6	18.4	14.6	19.5	15.0	20.4	15.5	22.0	16.1	23.4	15.9
	42 ℃	13.4	12.0	15.9	13.3	18.1	14.4	19.1	14.8	20.0	15.3	21.6	15.8	23.0	15.7
	44 ℃	13.2	11.8	15.7	13.1	17.8	14.1	18.8	14.5	19.7	15.0	21.3	15.6	22.6	15.5
	46 ℃	13.0	11.5	15.3	12.9	17.5	13.8	18.4	14.2	19.3	14.7	20.9	15.2	22.2	15.1
ND220	10 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.7	26.4	18.1	27.9	18.3
	12 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.9	18.4
	14 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.9	18.1
	16 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.9	18.3
	18 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.8	18.1
	20 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.4	18.0
	21 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.5	18.0
	23 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.3	27.1	17.7
	25 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.0	17.8
	27 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.0	17.8
	29 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.2	27.0	17.8
	31 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.3	27.0	17.8
	33 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.8	26.4	18.5	27.0	17.8
	35 ℃	15.8	13.8	18.7	15.4	21.2	16.6	22.4	17.1	23.9	17.7	26.4	18.5	27.0	18.0
	37 ℃	15.5	13.6	18.4	15.2	21.1	16.5	22.4	17.1	23.7	17.7	26.0	18.2	26.6	17.6
	39 ℃	15.3	13.5	18.1	15.0	21.1	16.5	22.3	17.0	23.7	17.7	25.7	18.4	26.2	17.5
	42 ℃	15.0	13.2	17.8	14.7	20.7	16.2	21.9	16.7	23.3	17.5	25.2	18.1	25.7	17.3
	44 ℃	14.8	13.0	17.5	14.5	20.4	15.9	21.6	16.4	22.9	17.3	24.8	17.9	25.3	17.0
	46 ℃	14.5	12.7	17.2	14.2	20.0	15.6	21.2	16.1	22.5	16.9	24.4	17.5	24.8	16.6
ND280	10 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.6	32.7	23.0	34.7	23.2
	12 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.1	34.7	23.4
	14 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.1	34.7	23.0
	16 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.1	34.7	23.3
	18 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	34.7	23.1
	20 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	34.3	23.0
	21 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	34.3	22.9
	23 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.2	33.7	22.6
	25 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	33.7	22.8
	27 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	33.7	22.8
	29 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.0	33.7	22.8
	31 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.2	33.7	22.8
	33 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.8	32.7	23.5	33.7	22.8
	35 ℃	19.7	17.6	23.3	19.6	26.5	21.2	28.0	21.8	29.9	22.6	32.7	23.5	33.7	23.0
	37 ℃	19.4	17.3	23.0	19.3	26.3	20.9	28.0	21.8	29.7	22.7	32.2	23.1	33.2	22.5
	39 ℃	19.2	17.1	22.7	19.1	26.3	20.9	27.9	21.6	29.5	22.5	31.8	23.4	32.8	22.4
	42 ℃	18.8	16.8	22.2	18.7	25.8	20.5	27.4	21.3	29.0	22.2	31.2	22.9	32.2	22.1
	44 ℃	18.5	16.5	21.9	18.4	25.4	20.2	27.0	21.0	28.6	21.9	30.8	22.6	31.7	21.8
	46 ℃	18.2	16.2	21.5	18.1	24.9	19.8	26.5	20.5	28.0	21.4	30.2	22.1	31.0	21.3

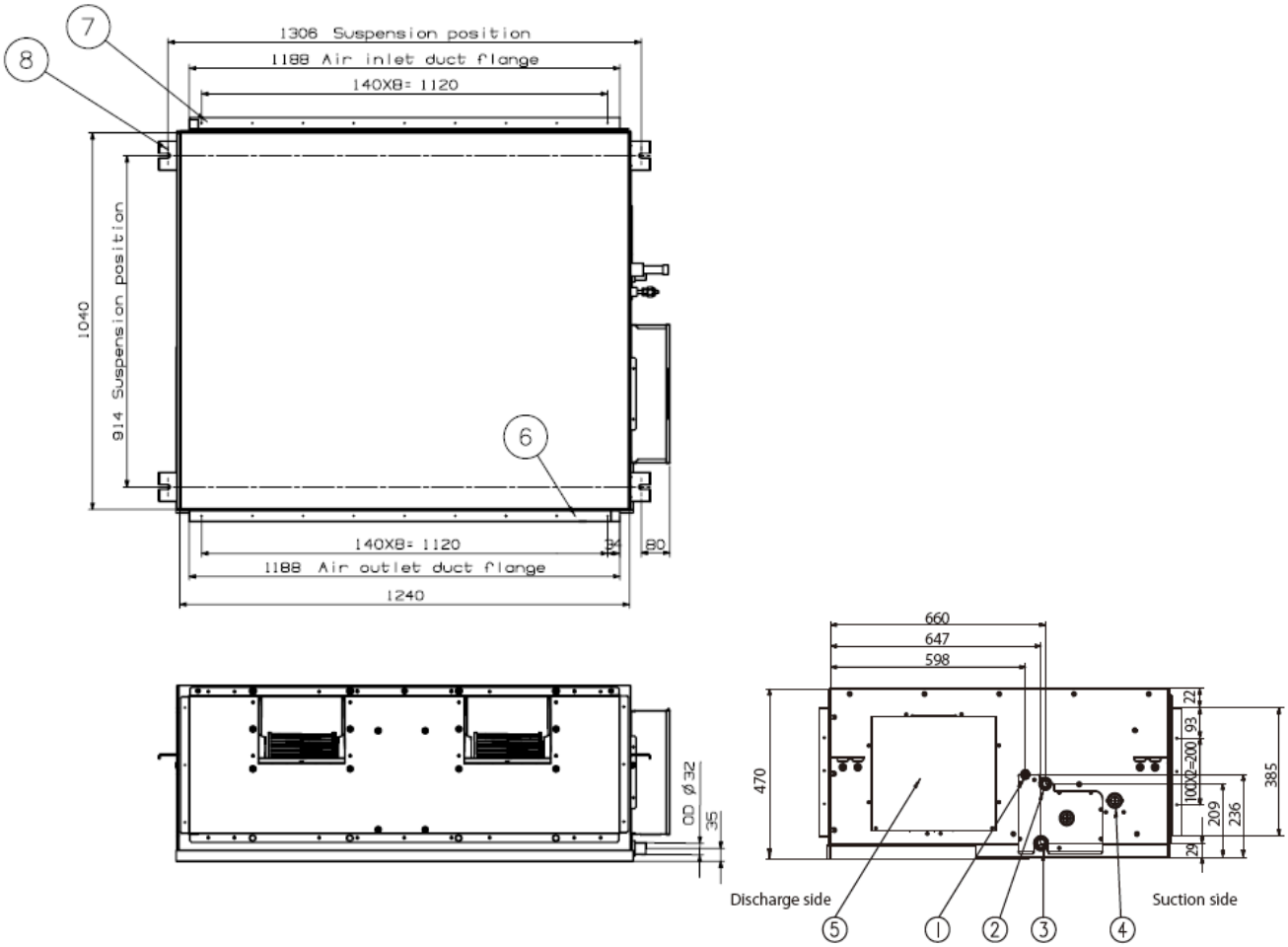
2. Capacity Table

2) Heating

Model	Outdoor Temperature(℃)		Indoor Temperature (℃,DB)				
			16.0 ℃	18.0 ℃	20.0 ℃	22.0 ℃	24.0 ℃
			TC	TC	TC	TC	TC
	DB	WB	kW	kW	kW	kW	kW
ND200	-20	-21	18.1	17.4	16.4	15.6	14.9
	-17	-18	18.5	17.8	16.8	15.9	15.3
	-15	-16	19.2	18.4	17.4	16.5	15.9
	-12	-13	20.5	19.7	18.6	17.6	16.9
	-10	-11	21.6	20.8	19.6	18.6	17.9
	-7	-8	22.6	21.7	20.5	19.5	18.7
	-5	-6	23.3	22.4	21.1	20.1	19.3
	-3	-4	23.8	22.9	21.6	20.5	19.7
	0	-1	24.4	23.4	22.1	21.0	20.2
	3	2	24.7	23.7	22.4	21.3	20.4
	5	4	24.7	23.7	22.4	21.3	20.4
	7	6	24.7	23.7	22.4	21.3	20.4
	9	8	24.7	23.7	22.4	21.3	20.4
	11	10	24.7	23.7	22.4	21.3	20.4
	13	12	24.7	23.7	22.4	21.3	20.4
	15	14	24.7	23.7	22.4	21.3	20.4
ND220	-20	-21	20.3	19.5	18.4	17.5	16.8
	-17	-18	20.8	20.0	18.9	18.4	18.2
	-15	-16	21.6	20.7	19.6	19.1	18.8
	-12	-13	23.0	22.1	20.9	20.2	20.0
	-10	-11	24.7	23.7	22.4	21.4	21.1
	-7	-8	25.4	24.4	23.0	22.3	22.0
	-5	-6	26.2	25.2	23.7	23.2	22.6
	-3	-4	26.8	25.8	24.3	24.1	23.1
	0	-1	27.4	26.5	24.9	24.3	23.7
	3	2	28.0	27.0	25.0	24.4	23.6
	5	4	28.3	27.0	25.0	24.4	23.6
	7	6	28.8	27.0	25.0	24.4	23.6
	9	8	28.8	27.0	25.0	24.4	23.6
	11	10	28.8	27.0	25.0	24.4	23.6
	13	12	28.8	27.0	25.0	24.4	23.6
	15	14	28.8	27.0	25.0	24.4	23.6
ND280	-20	-21	25.4	24.4	23.0	21.9	21.0
	-17	-18	26.0	25.0	23.6	22.9	22.5
	-15	-16	27.0	25.9	24.5	23.8	23.3
	-12	-13	28.8	27.7	26.1	25.2	24.8
	-10	-11	30.9	29.7	28.0	26.8	26.4
	-7	-8	31.8	30.5	28.8	27.9	27.3
	-5	-6	32.7	31.5	29.7	29.0	28.1
	-3	-4	33.5	32.2	30.4	29.8	28.7
	0	-1	34.3	33.1	31.1	30.4	29.3
	3	2	35.0	33.7	31.5	30.4	29.5
	5	4	35.3	33.7	31.5	30.4	29.5
	7	6	35.7	33.7	31.5	30.4	29.5
	9	8	35.7	33.7	31.5	30.4	29.5
	11	10	35.7	33.7	31.5	30.4	29.5
	13	12	35.7	33.7	31.5	30.4	29.5
	15	14	35.7	33.7	31.5	30.4	29.5

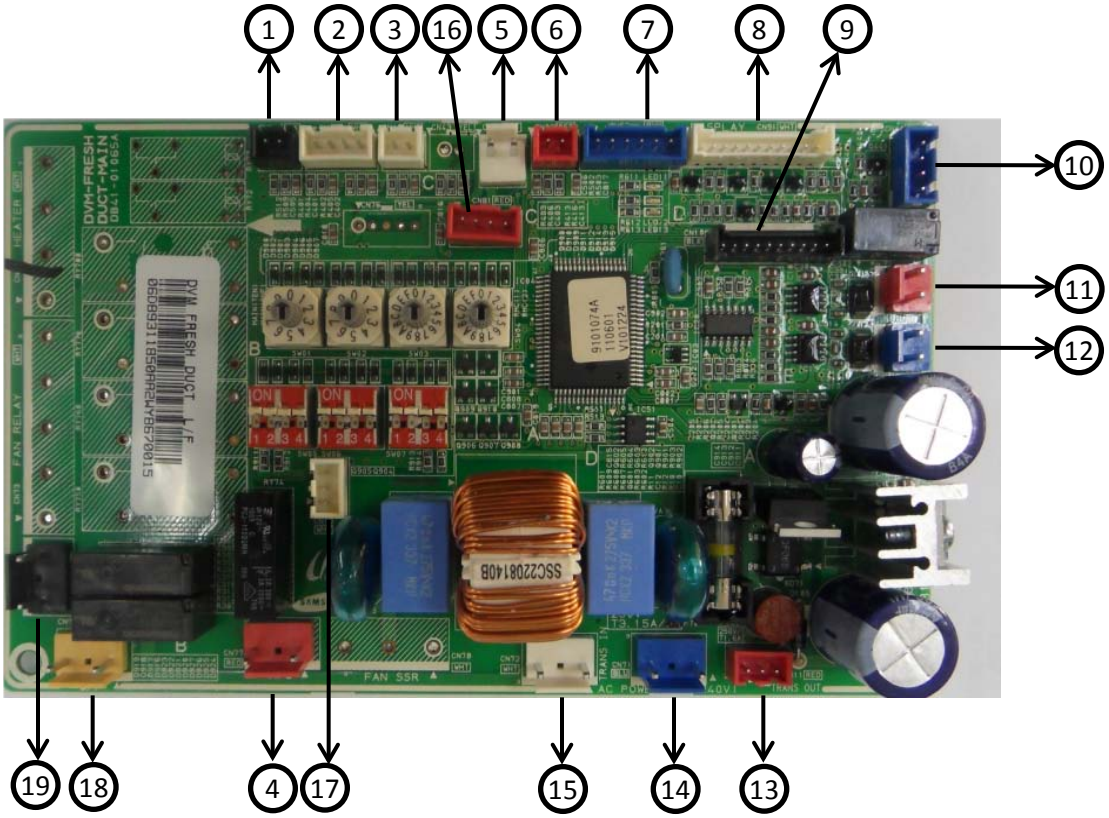
3. Dimensional drawing

1) ND200HHXEA / ND220HHXEA / ND280HHXEA



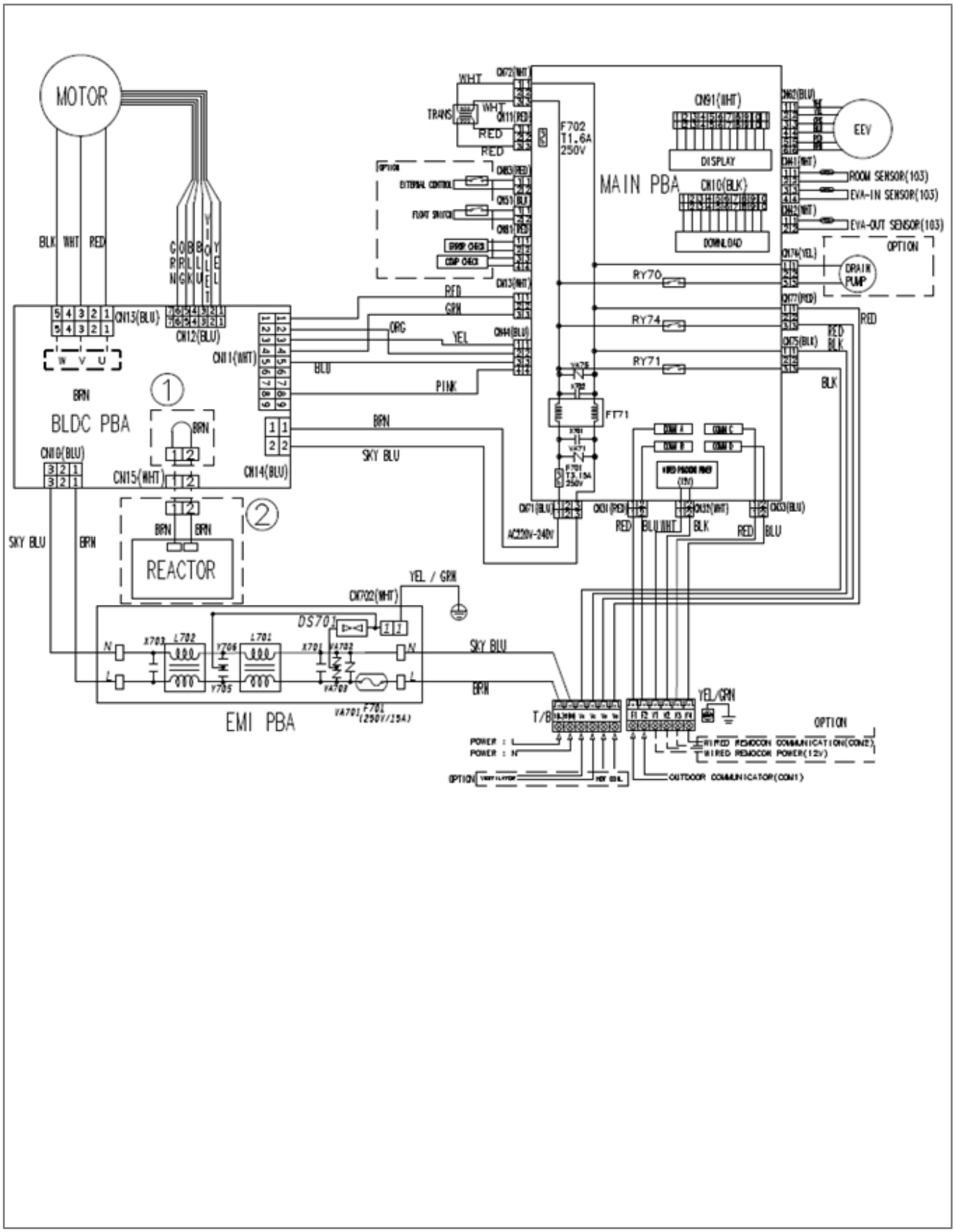
No.	Name	Description
①	Liquid pipe connection	ø9.52 (3/8″)
②	Gas pipe connection	ND200/220✶✶✶ : ø19.05(3/4″) ND280✶✶✶ : ø22.22(7/8″)
③	Drain pipe connection	VP25 (OD ø32, ID ø25)
④	Drain pipe connection (Option drain pump)	VP25 (OD ø32, ID ø25)
⑤	Power supply/Communication connection	
⑥	Air discharge grille flange	
⑦	Air suction flange	
⑧	Hook	3/8″ or M10

4. PCB connector lay-out



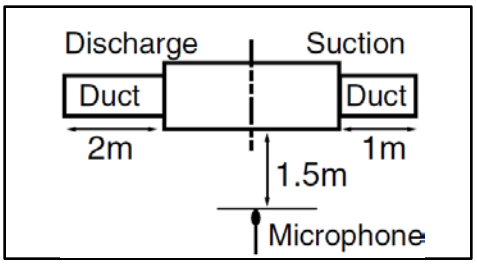
No.	CN#	COLOR	FUNCTION
1	51	Black	Floating Switch
2	41	White	Room/Eva In Temp. Sensor
3	42	White	Eva Out Temp. Sensor
4	43	Red	Hot Coil
5	32	White	Wired remote controller Power
6	83	Red	External Control
7	62	Blue	EEV
8	91	White	Display
9	10	Black	Micom Download
10	44	Blue	Motor Feedback
11	31	Red	Communication with outdoor units
12	33	Blue	Communication with wired remote controller
13	11	Red	Trans Out
14	71	Blue	AC Power
15	72	White	Trans In
16	81	Red	External CHECK
17	13	White	BLDC PCB Connector
18	74	Yellow	Drain Pump
19	75	Black	Ventilator

5. Electrical wiring diagram



6. Sound Pressure Level

1) Operation Sound Level



Unit : dB(A)

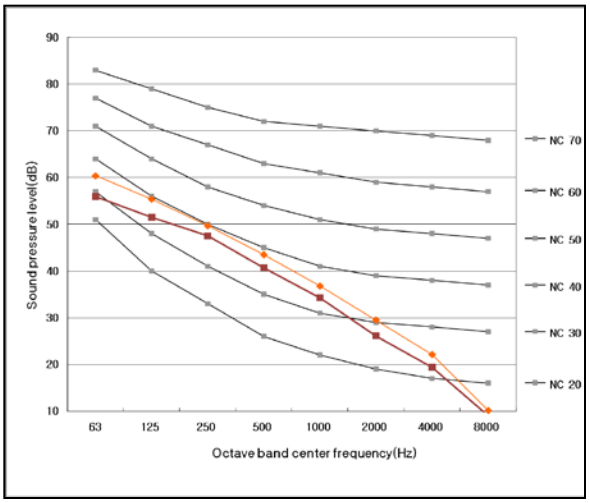
Model	High	Low
ND200HHXEA	46	43
ND220HHXEA	47	44
ND280HHXEA	48	45

Note

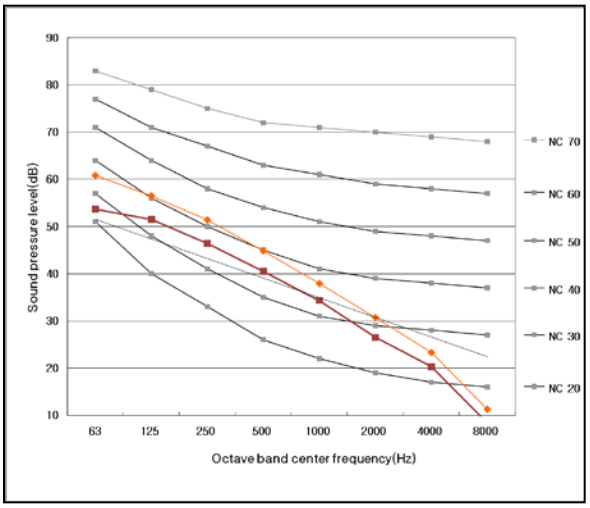
- ◆ These operation value were obtained in a dead room. Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.
- ◆ Operation sound level may differ depending on operation and ambient conditions.

2) NC Curve

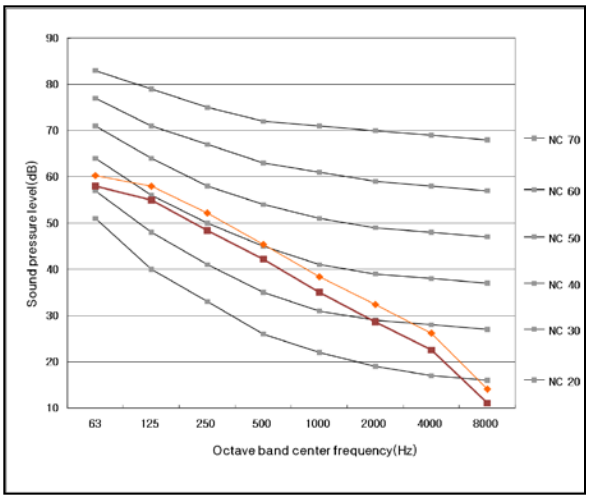
① ND200HHXEA



② ND220HHXEA



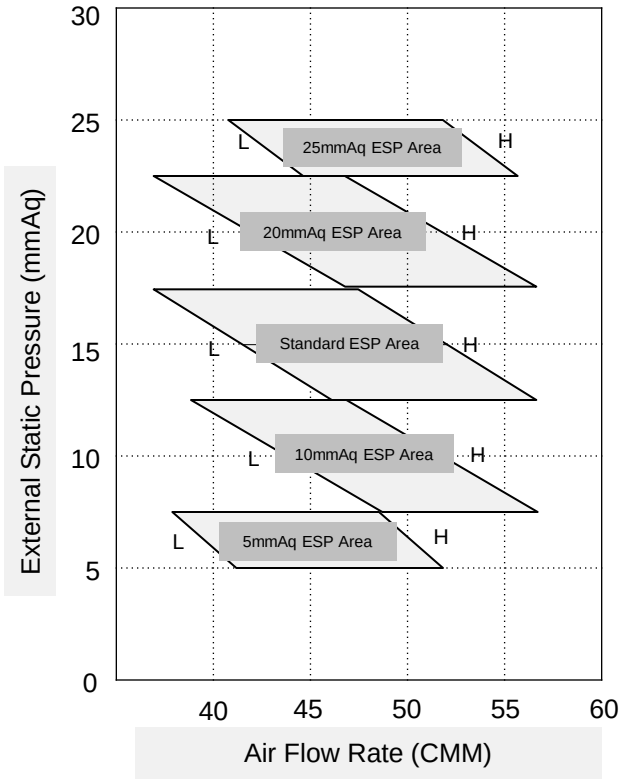
③ ND280HHXEA



7. Recommended operation range

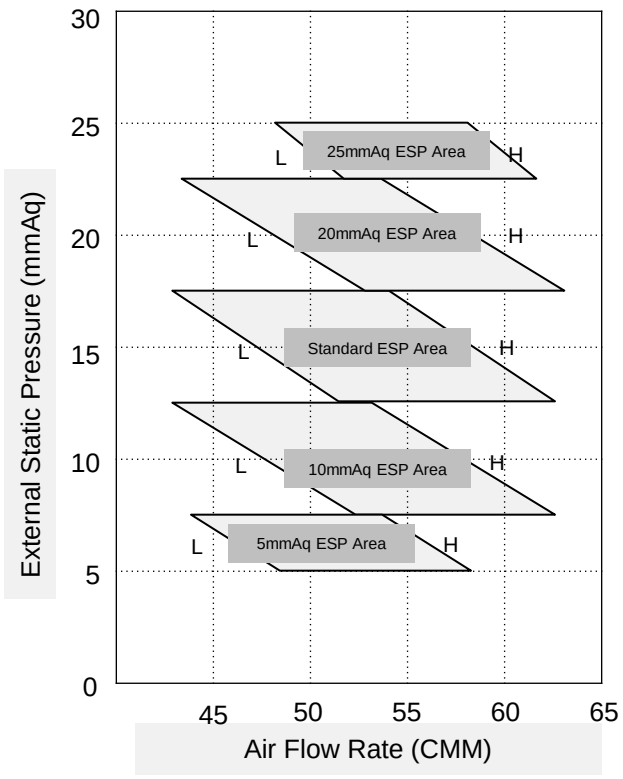
※ Adjust option code according to the actual installation condition (External Static Pressure).

1) ND200HHXEA



ESP (mmAq)	Option code
5	015A17150071-200000300000
10	015A171500B4-200000300000
15	015A171500D7-200000300000
20	015A1715023A-200000300000
25	015A1715028D-200000300000

2) ND220HHXEA

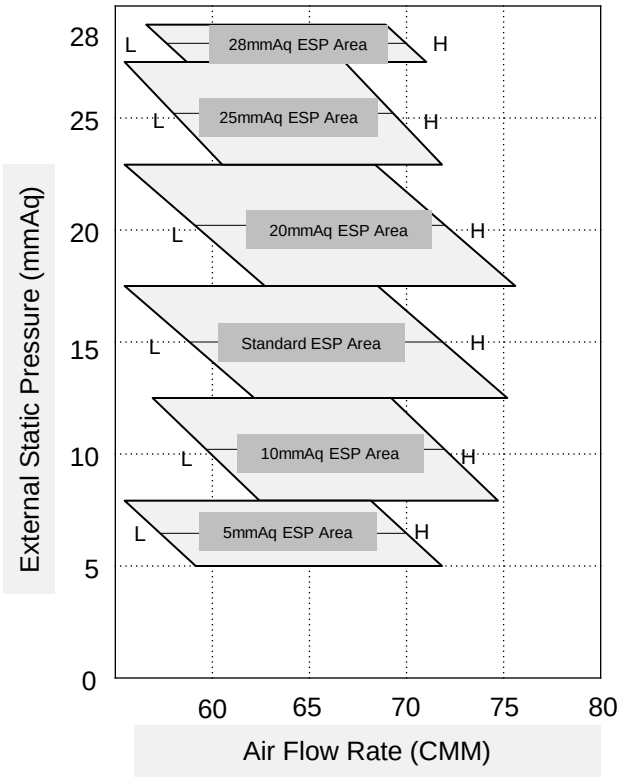


ESP (mmAq)	Option code
5	015A17160097-200000300000
10	015A171600C7-200000300000
15	015A171600E8-200000300000
20	015A1716024D-200000300000
25	015A1716029F-200000300000

7. Recommended operation range

※ Adjust option code according to the actual installation condition (External Static Pressure).

3) ND280HHXEA



ESP (mmAq)	Option code
5	015A17170207-200000300000
10	015A17170229-200000300000
15	015A1717025B-200000300000
20	015A1717029E-200000300000
25	015A171703D1-200000300000
28	015A171703F3-200000300000

Note

◆ ESP : 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) of installed indoor units.

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