

**SAMSUNG**

**VRF**

# Technical Data Book

Home DUCT for Europe  
(R410A, 50Hz)



Model : AM045MNLDEH\*\*\*, AM056MNLDEH\*\*\*, AM071MNLDEH\*\*\*

# History

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Version	Modification	Date	Remark
Ver. 1.0	New Development VRF Home DUCT for Europe	18.03.09	-

# Nomenclature

## Indoor Units

### Model Names

<b>AM</b>	<b>056</b>	<b>M</b>	<b>N</b>	<b>L</b>	<b>D</b>	<b>E</b>	<b>H</b>	/	<b>EU</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

#### (1) Classification

<b>AM</b>	VRF
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#### (2) Capacity

x 1/10 kW (3 digits)
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#### (3) Version

<b>K</b>	2016
<b>M</b>	2017
<b>N</b>	2018

#### (4) Product Type

<b>N</b>	Indoor Unit(NASA)
<b>X</b>	Outdoor Unit(NASA)

#### (5) Product Notation

<b>1</b>	1Way Cassette
<b>2</b>	2Way Cassette
<b>4</b>	4Way Cassette S
<b>N</b>	4Way Cassette S(600x600)
<b>L</b>	LSP Duct
<b>M</b>	MSP Duct
<b>H</b>	HSP Duct
<b>T</b>	Neo Forte
<b>Q</b>	Neo Forte(EEV)
<b>C</b>	Ceiling
<b>J</b>	Console
<b>F</b>	Floor Standing
<b>K</b>	ERV Plus
<b>B</b>	Hydro Unit

#### (6) Feature

<b>F</b>	Flagship
<b>P</b>	Premium
<b>D</b>	Deluxe
<b>S</b>	Standard

#### (7) Rating Voltage

<b>E</b>	220~240V, 50Hz, 1Ø
<b>K</b>	220~240V, 50/60Hz, 1Ø
<b>G</b>	380~415V, 50Hz, 3Ø

#### (8) Mode

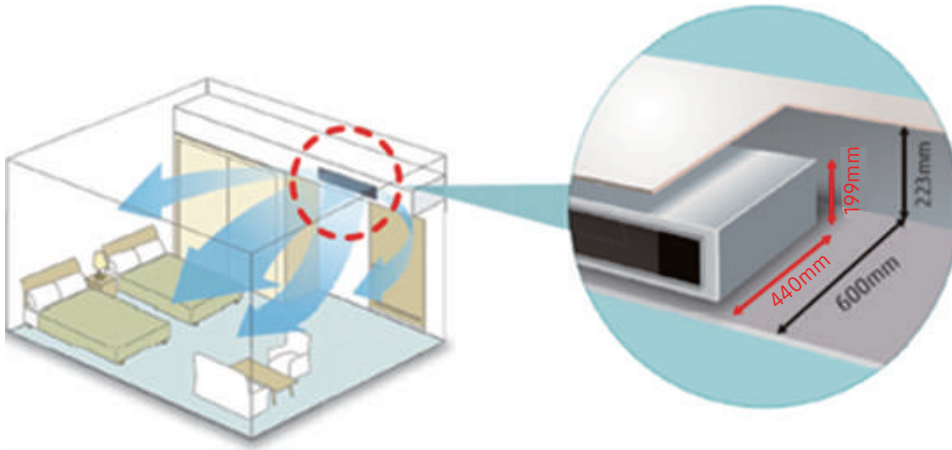
<b>B</b>	Heat Pump(R134a)
<b>H</b>	Heat Pump(R410A)

# Features & Benefits

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Slim design of height 199mm : can easily mounted in a ceiling

Built-in drain pump with 750mm lift : increase installation speed and pipe work flexibility






Samsung		Comapititors		
Old Model	New Model	"A" company	"B" company	"C" company
600mm	440mm	450mm	447mm	460mm

# Line-up

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## Indoor unit

Model	Capacity (kW)		
	4.5	5.6	7.1
	AM045MNLDEH/EU	AM056MNLDEH/EU	AM071MNLDEH/EU
Home DUCT			

# Contents

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## Home DUCT

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# 1. Specification

## Home DUCT

Type			Home Duct	Home Duct	Home Duct	
Model Name			AM045MNLDEH/EU	AM056MNLDEH/EU	AM071MNLDEH/EU	
Power Supply		Φ, #, V, Hz	1,220~240,50	1,220~240,50	1,220~240,50	
Mode		-	HP	HP	HP	
Performance	Capacity	Cooling	kW	4.5	5.6	7.1
			Btu/h	15400	19100	24200
	Heating	kW	5	6.3	8	
		Btu/h	17100	21500	27300	
Power	Power Input	Cooling	W	51	73	82
		Heating		46	68	77
	Current Input	Cooling	A	0.45	0.62	0.69
		Heating		0.41	0.58	0.65
	Current	MCA	A	0.56	0.78	0.86
		MFA		15	15	15
Heat Ex-changer	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Green Hydrophile	Green Hydrophile	Green Hydrophile
Fan	Type		-	Sirocco Fan	Sirocco Fan	Sirocco Fan
	Quantity		EA	2	2	3
	Air Flow Rate	H/M/L	m <sup>3</sup> /min	12.50/10.00/7.50	15.50/12.50/9.50	18.00/14.50/11.00
			l/s	208.33/166.67/125.00	258.33/208.33/158.33	300/241.67/183.33
	External Pressure	Max. (Min/Std/Max)	mmAq	4 (0/2/4)	4 (0/2/4)	4 (0/2/4)
			Pa	39.2 (0/19.6/39.2)	39.2 (0/19.6/39.2)	39.2 (0/19.6/39.2)
Fan Motor	Model		-	BLDC	BLDC	BLDC
	Output x n		W	84 x 1	84 x 1	84 x 1
Piping Connections	Liquid Pipe		Type	Flare connection	Flare connection	Flare connection
			Φ, mm (inch)	6.35 (1/4)	6.35 (1/4)	9.52 (3/8)
	Gas Pipe		Type	Flare Connection	Flare Connection	Flare Connection
			Φ, mm (inch)	12.70 (1/2)	12.70 (1/2)	15.88 (5/8)
	Heat Insulation		-	Both Insulation	Both Insulation	Both Insulation
Drain Pipe		Φ,mm	Both Insulation	Both Insulation	Both Insulation	
Wiring Connection	Communication	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
Refrigerant	Type		-	R410A	R410A	R410A
	Electronic Expansion Valve		-	EEV INCLUDED	EEV INCLUDED	EEV INCLUDED
Sound	Sound Pressure Level	H/M/L	dB(A)	32/28/25	34/30/26	34/30/27
	Sound Power Level	Cooling		49	51	53

# 1. Specification

## Home DUCT

Type			Home Duct	Home Duct	Home Duct
Model Name			AM045MNLDEH/EU	AM056MNLDEH/EU	AM071MNLDEH/EU
Dimensions	Net Weight	kg	18.9	18.9	22.3
	Shipping Weight	kg	21.8	21.8	25.3
	Net Dimensions (W×H×D)	mm	900×199×440	900×199×440	1100×199×440
	Shipping Dimensions (W×H×D)	mm	1151×280×544	1151×280×544	1351×280×544
Casing	Material	-	GI-SGCC	GI-SGCC	GI-SGCC
Drain Pump	Drain Pump	-	Drain Pump Included	Drain Pump Included	Drain Pump Included
	Max. lifting Height / Displacement	mm / Liter/h	750/24	750/24	750/24
Additional Accessories	Air Filter	-	Filter Included	Filter Included	Filter Included

### NOTE

- Specification may be subject to change without prior notice.
  - 1) Mode : HP(Heat Pump), HR(Heat Recovery)
  - 2) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°C DB, 19°C WB, Outdoor temperature 35°C DB, 24°C WB
    - Heating : Indoor temperature 20°C DB, 15°C WB, Outdoor temperature 7°C DB, 6°C WB
    - Equivalent refrigerant piping length 7.5m, Level differences 0m
  - 3) Sound pressure level is obtained in an anechoic room.
    - Sound pressure level is a relative value, depending on the distance and acoustic environment.
    - Sound pressure level may differ depending on operation condition.
    - dBA = A-weighted sound pressure level
    - Reference acoustic pressure 0 dB = 20uPa
  - 4) Sound power level is an absolute value that a sound source generates.
    - dBA = A-weighted sound power level
    - Reference power : 1pW
    - Measured according to ISO 3741
  - 5) Select wire size based on the value of MCA



## 2. Summary Table

### Home DUCT

#### Performance Characteristics

Model Code	Capacity(kW)		Fan speed	
	Cooling	Heating	Mode	CMM
AM045MNLDEH/EU	4.5	5.0	H / M / L	12.50/10.00/7.50
AM056MNLDEH/EU	5.6	6.3		15.50/12.50/9.50
AM071MNLDEH/EU	7.1	8.0		18.00/14.50/11.00

#### Electrical Characteristics

Indoor Unit	Power Supply (Ø, #, V, Hz)	Power Input (W)	Current Input (A)	MCA (A)	MFA (A)	FLA (A)
AM045MNLDEH/EU	1,2,220-240, 50Hz	51	0.45	0.56	15	0.45
AM056MNLDEH/EU		73	0.62	0.78	15	0.62
AM071MNLDEH/EU		82	0.69	0.86	15	0.69

#### NOTE

- MCA : Minimum circuit amperes
- MFA: Maximum fuse amperes
- FLA: Full load amperes
- Select wire size based on the value of MCA

# 3. Capacity Table

## Home DUCT

### Cooling

TC: Total Capacity, SHC: Sensible Heat Capacity

Model	Outdoor temperature (°C, DB)	Indoor temperature (°C, DB / WB)													
		20(°C,DB)		23(°C,DB)		26(°C,DB)		27(°C,DB)		28(°C,DB)		30(°C,DB)		32(°C,DB)	
		14(°C,WB)		16(°C,WB)		18(°C,WB)		19(°C,WB)		20(°C,WB)		22(°C,WB)		24(°C,WB)	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
45	10	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.4	3.3
	12	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.4	3.3
	14	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.4	3.3
	16	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	18	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	20	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	21	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	23	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	25	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	27	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	29	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	31	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	33	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	35	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.7	3.2	5	3.2	5.3	3
	37	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.6	3.1	4.9	3.1	5.2	3
	39	3.1	2.6	3.7	3	4.2	3.1	4.5	3.2	4.6	3.1	4.9	3.1	5.1	2.9
	42	3.1	2.6	3.7	3	4.2	3.1	4.4	3.1	4.5	3	4.6	2.9	4.8	2.8
44	3.1	2.6	3.7	3	4	3	4.3	3	4.3	2.9	4.4	2.8	4.5	2.7	
56	10	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.3	4.1	6.7	3.9
	12	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.3	4.1	6.7	3.9
	14	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.7	3.9
	16	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	18	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	20	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	21	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	23	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	25	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	27	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	29	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	31	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	33	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	35	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.2	4	6.6	3.8
	37	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.1	3.9	6.5	3.7
	39	3.9	3.1	4.6	3.6	5.3	3.8	5.6	4	5.8	4	6.1	3.9	6.4	3.6
	42	3.9	3.1	4.6	3.6	5.3	3.8	5.4	3.9	5.6	3.9	5.8	3.8	6	3.4
44	3.9	3.1	4.6	3.6	5	3.7	5.3	3.8	5.4	3.8	5.5	3.7	5.6	3.2	

# 3. Capacity Table

## Home DUCT

### Cooling

TC: Total Capacity, SHC: Sensible Heat Capacity

Model	Outdoor temperature (°C, DB)	Indoor temperature (°C, DB / WB)													
		20(°C,DB)		23(°C,DB)		26(°C,DB)		27(°C,DB)		28(°C,DB)		30(°C,DB)		32(°C,DB)	
		14(°C,WB)		16(°C,WB)		18(°C,WB)		19(°C,WB)		20(°C,WB)		22(°C,WB)		24(°C,WB)	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
71	10	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	8	5.7	8.5	5.4
	12	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.5	5.4
	14	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.5	5.4
	16	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	18	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	20	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	21	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	23	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	25	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	27	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	29	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	31	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	33	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	35	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.4	5.6	7.9	5.6	8.4	5.3
	37	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.3	5.5	7.8	5.5	8.2	5.1
	39	4.9	4.3	5.8	5	6.7	5.2	7.1	5.4	7.3	5.5	7.7	5.4	8.1	5.1
42	4.9	4.3	5.8	5	6.7	5.2	6.9	5.3	7	5.4	7.3	5.3	7.6	4.9	
44	4.9	4.3	5.8	5	6.3	5	6.7	5.2	6.8	5.3	7	5.2	7.1	4.7	

### NOTE

The performance table shows the average value of each conditions.

# 3. Capacity Table

## Home DUCT

### Heating

TC: Total Capacity

Model	Outdoor temperature (°C)		Indoor temperature (°C,DB)				
			16	18	20	22	24
	DB	WB	TC	TC	TC	TC	TC
45	-20	-21	3.1	3.1	2.9	2.9	2.9
	-17	-18	3.2	3.2	3.1	3	3
	-15	-16	3.3	3.3	3.2	3.1	3
	-12	-13	3.5	3.4	3.4	3.3	3.2
	-10	-11	3.7	3.6	3.6	3.5	3.5
	-7	-8	3.9	3.8	3.8	3.7	3.6
	-5	-6	4.1	4	4	3.9	3.7
	-3	-4	4.3	4.2	4.2	4	3.9
	0	-1	4.5	4.4	4.4	4.2	4
	3	2.2	4.7	4.7	4.6	4.4	4.2
	5	4.1	4.9	4.9	4.8	4.5	4.2
	7	6	5.1	5.1	5	4.6	4.2
	9	7.9	5.3	5.2	5	4.6	4.2
	11	9.8	5.5	5.2	5	4.6	4.2
	13	12	5.6	5.3	5	4.6	4.2
15	14	5.8	5.4	5	4.6	4.2	
56	-20	-21	3.9	3.8	3.8	3.7	3.7
	-17	-18	4	4	3.9	3.8	3.8
	-15	-16	4.2	4.1	4	3.9	3.8
	-12	-13	4.4	4.3	4.2	4.2	4.1
	-10	-11	4.6	4.6	4.5	4.4	4.4
	-7	-8	4.9	4.8	4.8	4.7	4.5
	-5	-6	5.2	5.1	5	4.9	4.7
	-3	-4	5.4	5.3	5.3	5.1	4.9
	0	-1	5.7	5.6	5.5	5.3	5
	3	2.2	5.9	5.9	5.8	5.6	5.3
	5	4.1	6.2	6.1	6	5.7	5.3
	7	6	6.5	6.4	6.3	5.8	5.3
	9	7.9	6.7	6.5	6.3	5.8	5.3
	11	9.8	6.9	6.6	6.3	5.8	5.3
	13	12	7.1	6.7	6.3	5.8	5.3
15	14	7.3	6.8	6.3	5.8	5.3	

# 3. Capacity Table

## Home DUCT

### Heating

TC: Total Capacity

Model	Outdoor temperature (°C)		Indoor temperature (°C,DB)				
			16	18	20	22	24
	DB	WB	TC	TC	TC	TC	TC
71	-20	-21	4.9	4.9	4.8	4.7	4.7
	-17	-18	5.1	5	4.9	4.8	4.8
	-15	-16	5.3	5.2	5.1	4.9	4.8
	-12	-13	5.6	5.5	5.4	5.3	5.2
	-10	-11	5.9	5.8	5.7	5.6	5.6
	-7	-8	6.2	6.1	6	5.9	5.8
	-5	-6	6.5	6.5	6.4	6.2	6
	-3	-4	6.9	6.8	6.7	6.4	6.2
	0	-1	7.2	7.1	7	6.7	6.8
	3	2.2	7.6	7.5	7.3	7.1	6.8
	5	4.1	7.9	7.8	7.7	7.2	6.8
	7	6	8.2	8.1	8	7.4	6.8
	9	7.9	8.5	8.2	8	7.4	6.8
	11	9.8	8.7	8.4	8	7.4	6.8
13	12	9	8.5	8	7.4	6.8	
15	14	9.2	8.6	8	7.4	6.8	

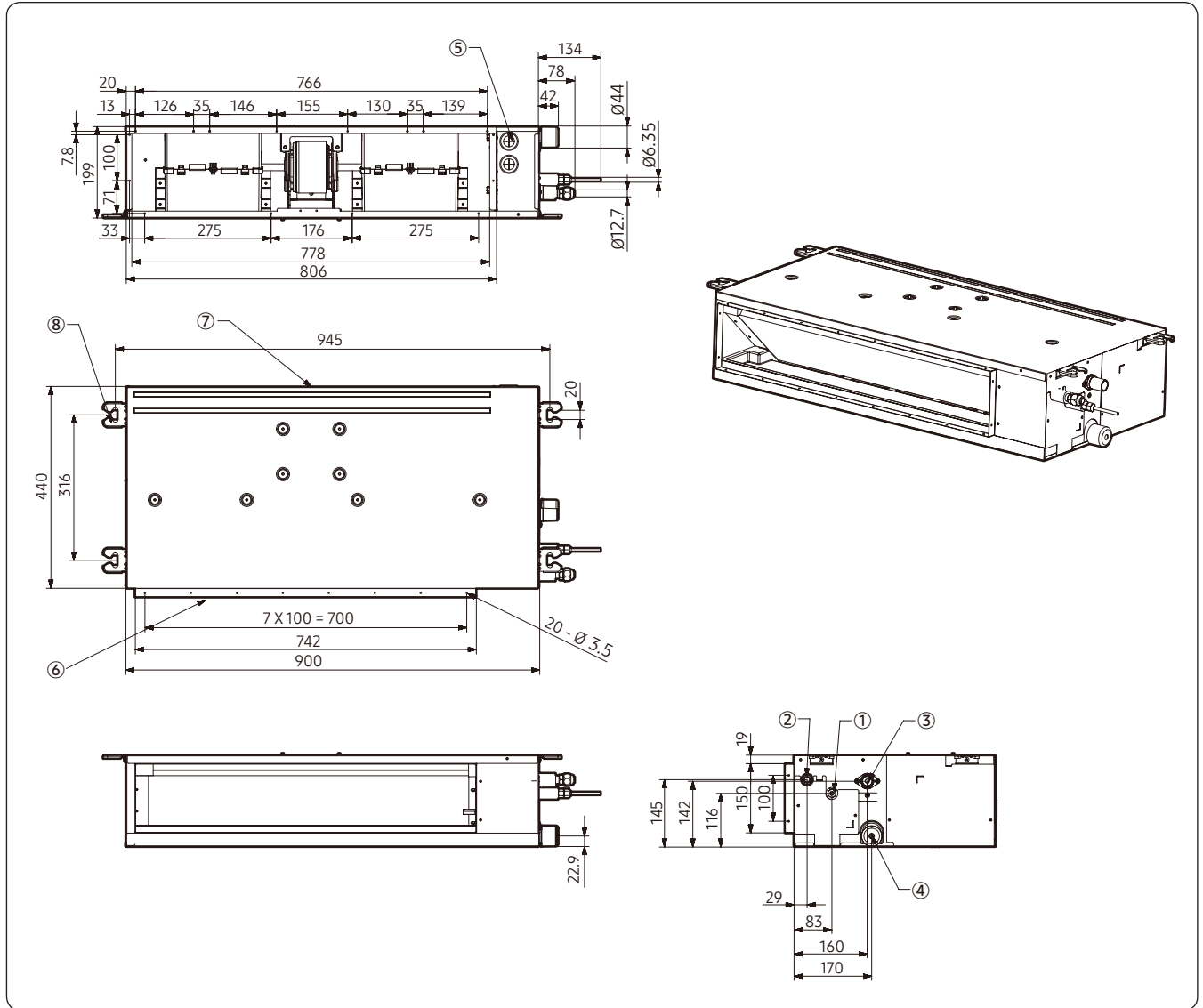
### NOTE

The performance table shows the average value of each conditions.

# 4. Dimensional Drawing

## Home DUCT

### AM045MNLDEH/EU, AM056MNLDEH/EU

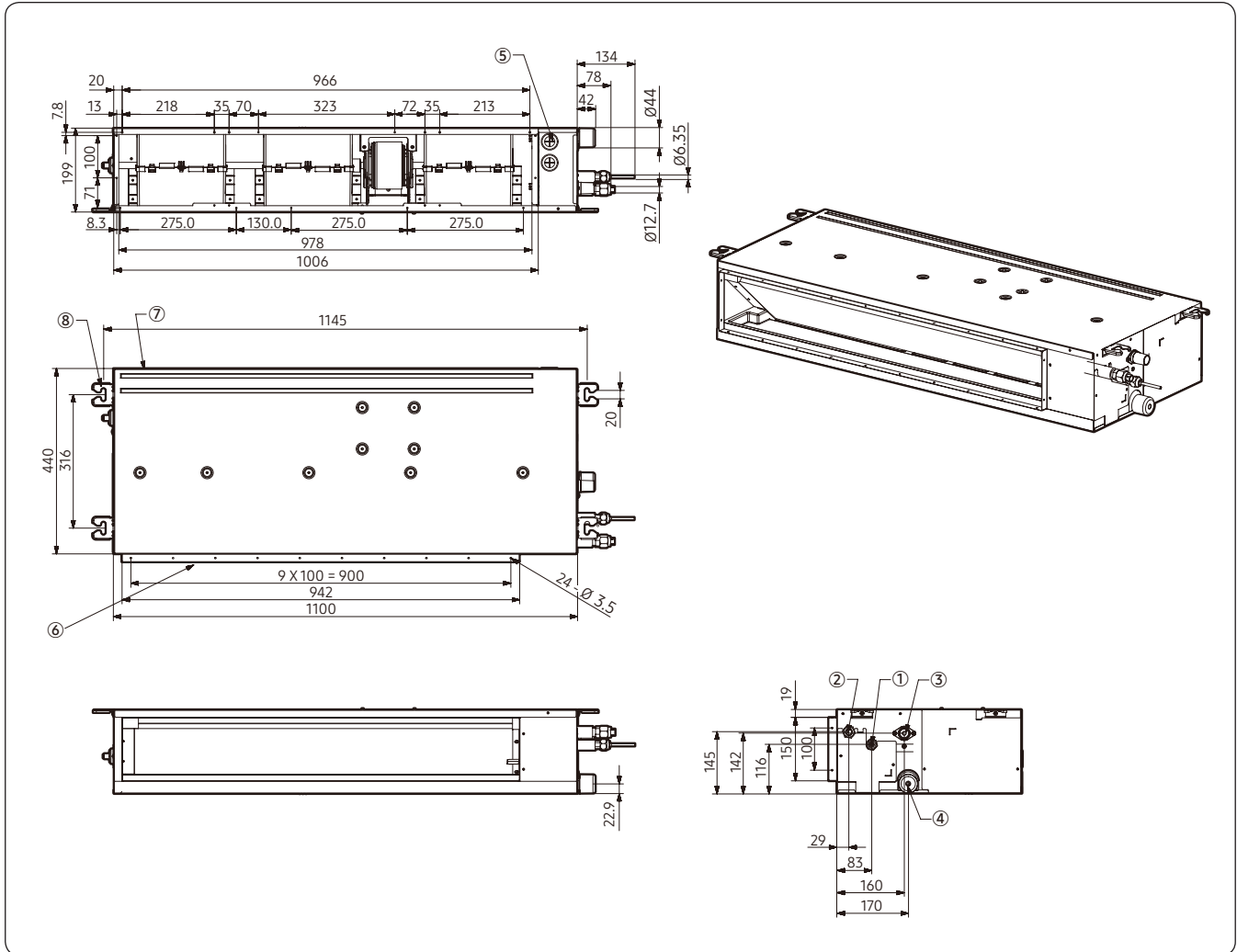


No.	Name	Description
①	Refrigerant Liquid Pipe	Ø6.35 [1/4"] Flare Connection
②	Refrigerant Gas Pipe	Ø12.70 [1/2"] Flare Connection
③	Condensate Drain	VP25 (OD 32, ID 25)
④	Condensate Drain (Option)	VP25 (OD 32, ID 25)
⑤	Power & Comm. Wiring Conduits	-
⑥	Supply Air Flange	-
⑦	Return Air Flange	-
⑧	Hook	-

# 4. Dimensional Drawing

## Home DUCT

### AM071MNLDEH/EU

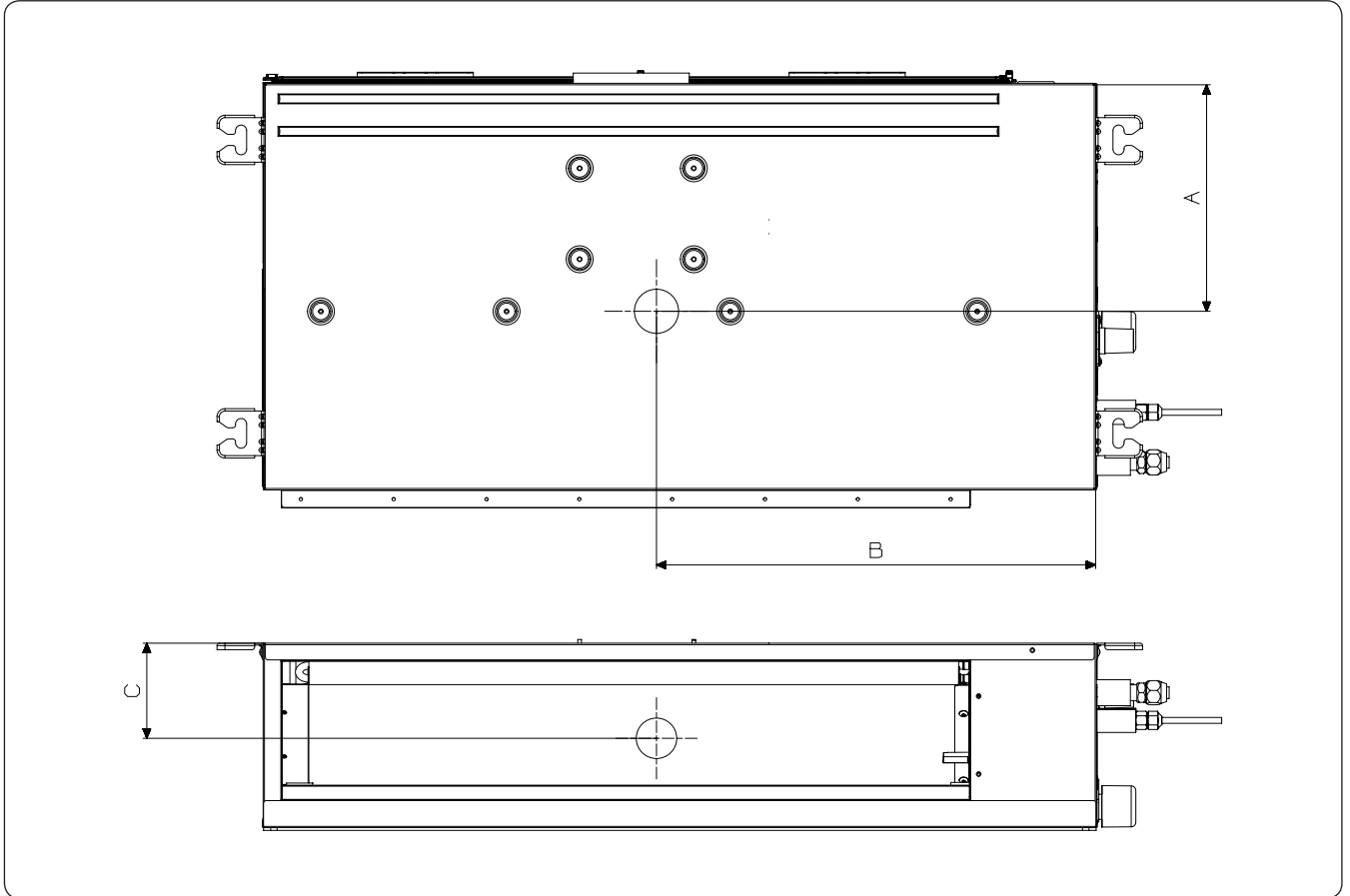


No.	Name	Description
①	Refrigerant Liquid Pipe	Ø9.52 [3/8"] Flare Connection
②	Refrigerant Gas Pipe	Ø15.88 [5/8"] Flare Connection
③	Condensate Drain	VP25 (OD 32, ID 25)
④	Condensate Drain (Option)	VP25 (OD 32, ID 25)
⑤	Power & Comm. Wiring Conduits	-
⑥	Supply Air Flange	-
⑦	Return Air Flange	-
⑧	Hook	-

# 5. Center of Gravity

## Home DUCT

(Unit: mm)

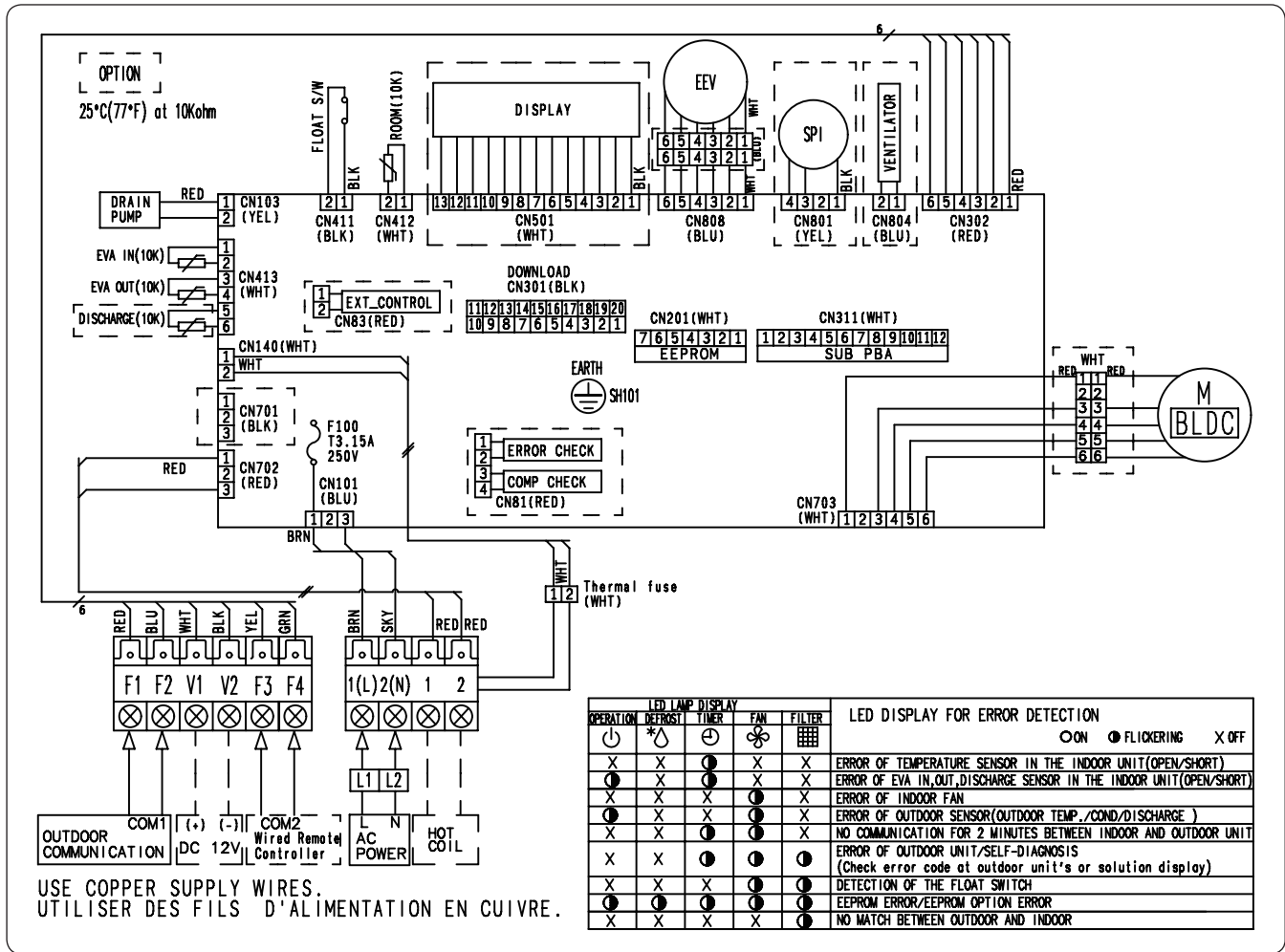


Model	A	B	C
4.5kW/5.6kW	233	436	100
7.1kW	240	540	100



# 6. Electrical Wiring Diagram

## Home DUCT



F100	FUSE	EEV	Electronic Expansion Valve	EVA-IN(10K)	Thermistor EVA IN(10K)
M[BLDC]	Motor (IDU fan)	SPI	S-Plasma ion	EVA-OUT(10K)	Thermistor EVA OUT(10K)
Thermal Fuse	Terminal Block Thermal Fuse	ROOM(10K)	Thermistor ROOM(10K)	DISCHARGE(10K)	Thermistor DISCHARGE(10K)

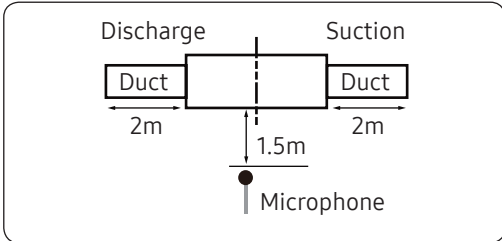
### NOTE

- This wiring diagram applies only to the Indoor unit.
- Symbols show as follow :  
blk: black, red: red, blu: blue, wht: white, yel: yellow, brn: brown, sky: skyblue: grn: green
- For connection wiring indoor-outdoor transmission F1-F2, indoor-wired remote controller transmission F3-F4.
- ⊕ Protective earth(screw), □□□□ : connector,  $\frac{N}{\text{wire}}$  : The wire quantity

# 7. Sound Data

## Home DUCT

### Sound pressure level

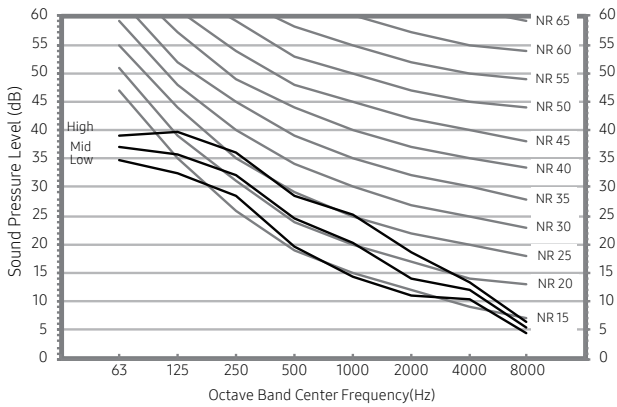


Unit: dB(A)

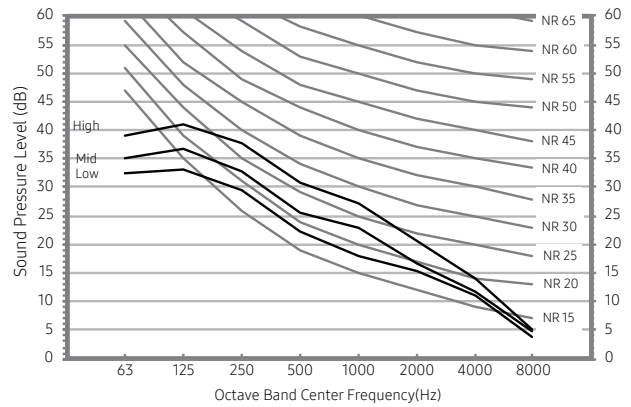
MODEL	High	Mid	Low
AM045MNLDEH/EU	32	28	25
AM056MNLDEH/EU	34	30	26
AM071MNLDEH/EU	34	30	27

• NR Curve

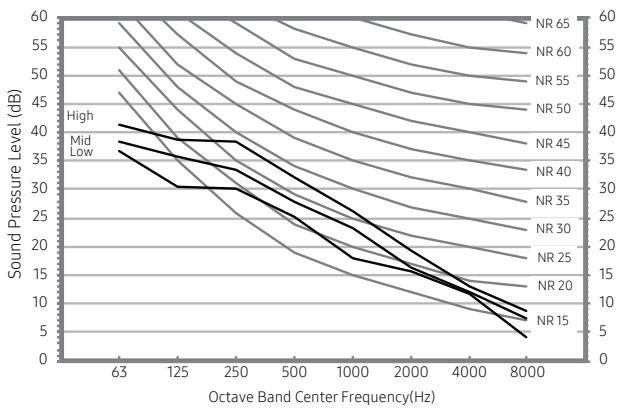
1) AM045MNLDEH/EU



2) AM056MNLDEH/EU



3) AM071MNLDEH/EU



**NOTE**

- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dBA = A weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

# 7. Sound Data

## Home DUCT

### Sound Power level

**NOTE**

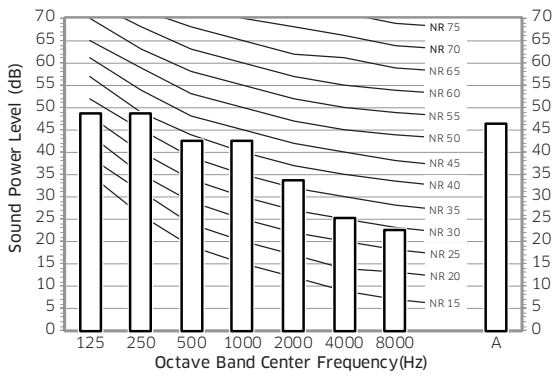
- Specifications may be subject to change without prior notice
  - Sound power level is an absolute value that a sound source generates.
  - dBA = A-weighted sound power level.
  - Reference power : 1pW.
  - Measured according to ISO 3741.

Unit: dB(A)

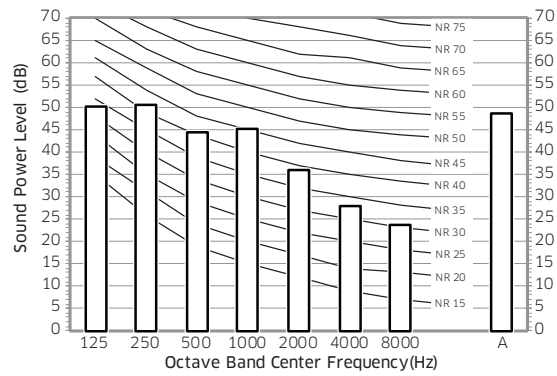
Model	Power
AM045MNLDEH/EU	47
AM056MNLDEH/EU	49
AM071MNLDEH/EU	49

• NR Curve

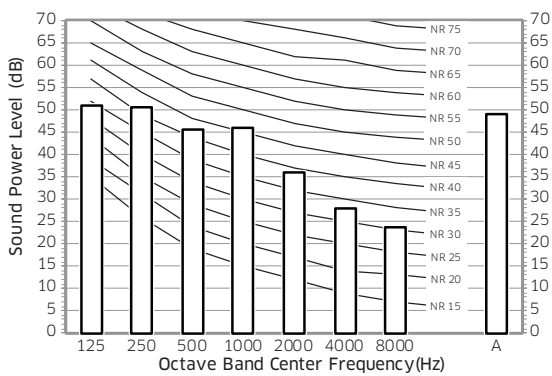
1) AM045MNLDEH/EU



2) AM056MNLDEH/EU



3) AM071MNLDEH/EU



# 8. Fan Characteristics

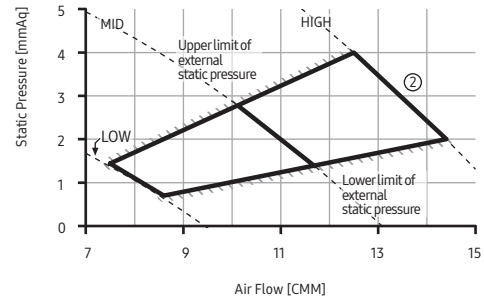
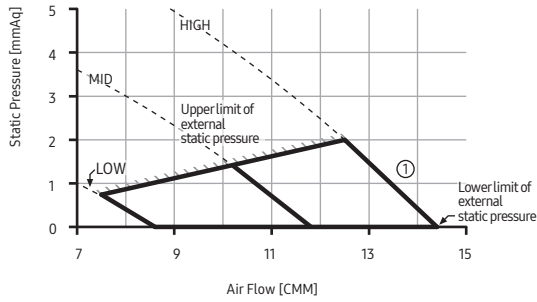
## Home DUCT

### 1) AM045MNLDEH

External Static Pressure(mmAq)	Option Code	Air Flow [CMM]		
		High	Mid	Low
0	010454-1C5458-202D2D-301110	7.5	10.0	12.5

External Static Pressure(mmAq)	Option Code
0 < P ≤ 2	010454-1C54EA-202D2D-301110

External Static Pressure(mmAq)	Option Code
2 < P ≤ 4	010454-1C585F-202D2D-301110

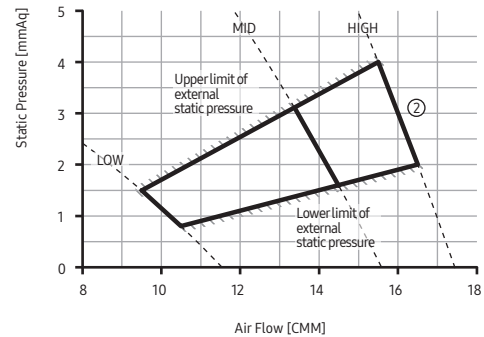
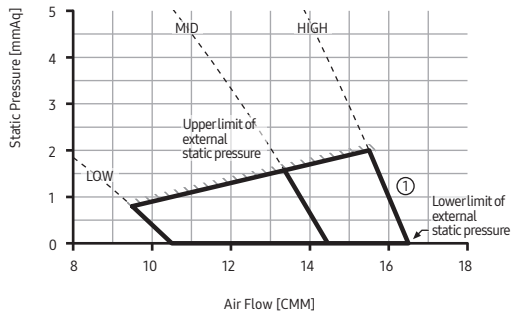


### 2) AM056MNLDEH

External Static Pressure(mmAq)	Option Code	Air Flow [CMM]		
		High	Mid	Low
0	010454-1C54FC-203838-301110	9.5	12.5	15.5

External Static Pressure(mmAq)	Option Code
0 < P ≤ 2	010454-1C5950-203838-301110

External Static Pressure(mmAq)	Option Code
2 < P ≤ 4	010454-1C59C4-203838-301110

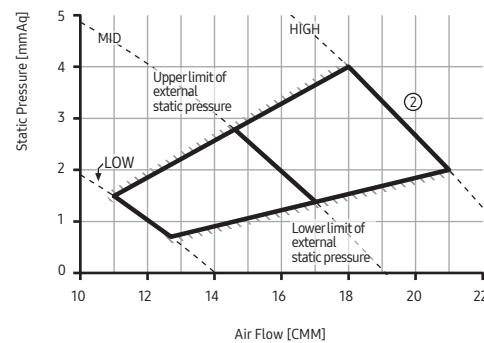
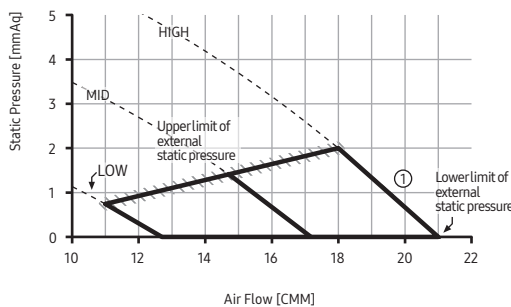


### 3) AM071MNLDEH

External Static Pressure(mmAq)	Option Code	Air Flow [CMM]		
		High	Mid	Low
0	010454-1C54D9-204747-301110	11.0	14.5	18.0

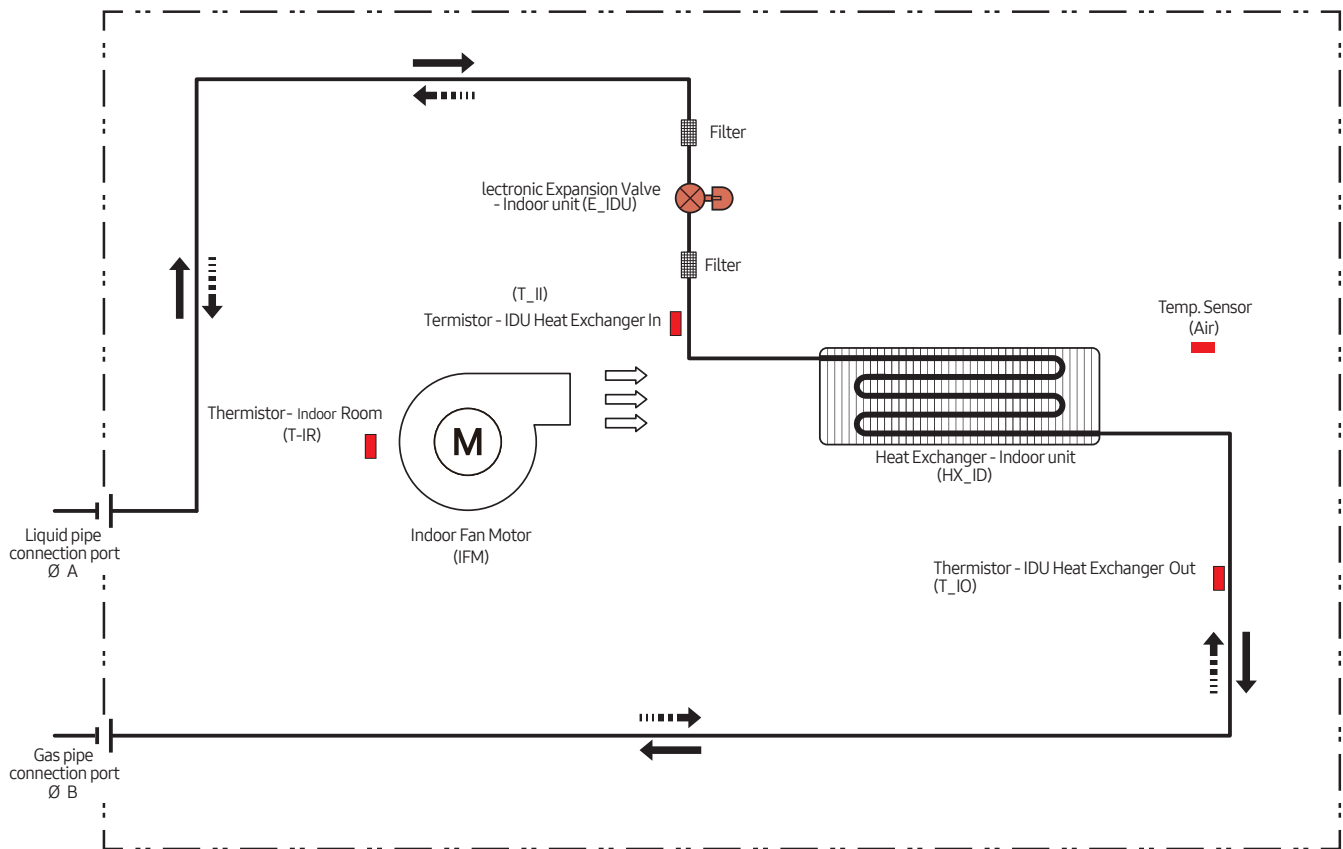
External Static Pressure(mmAq)	Option Code
0 < P ≤ 2	010454-1C584E-204747-301110

External Static Pressure(mmAq)	Option Code
2 < P ≤ 4	010454-1C59B2-204747-301110



# 9. Piping Diagram

## Home DUCT



Refrigerant Flow	
Cooling	Heating
→	- - - - - →

MODEL	A	B
AM045MNLDEH/EU	6.35	12.7
AM056MNLDEH/EU	6.35	12.7
AM071MNLDEH/EU	9.52	15.88

# 10. Installation

## Home DUCT

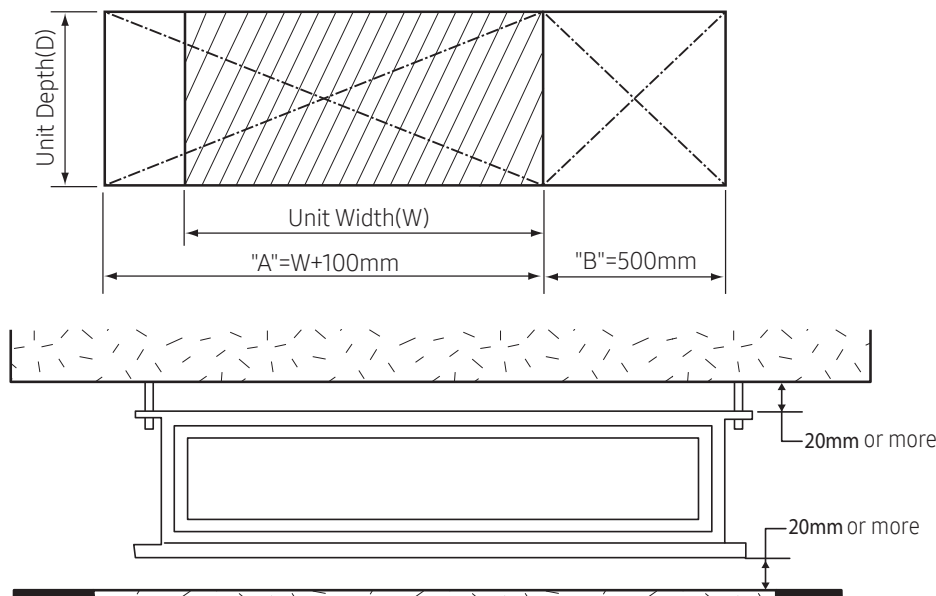
### Deciding on where to install the indoor unit

#### Indoor unit

- ◆ There must be no obstacles near the air inlet and outlet.
- ◆ Install the indoor unit on a ceiling that can support its weight.
- ◆ Maintain sufficient clearance around the indoor unit.
- ◆ Make sure that the water dripping from the drain hose runs away correctly and safely.
- ◆ The indoor unit must be installed in this way, that they are out of public access. (Not touchable by the users)
- ◆ After connecting a chamber, insulate the connection part between the indoor unit and the chamber with t10 or thicker insulation. Otherwise, there can be air leak or dew from the connection part.

#### Space requirements for installation & service

- Construction Standard for Inspection Hole
  - 1) In case, the ceiling is tex tile, Inspection hole dose not need.
  - 2) In case, the ceiling is plaster board, Inspection hole depends on Inside height of the ceiling.
    - a. Height is more than **0.5m** : Only "B" [Inspection for PBA] is applied.
    - b. Height is less than **0.5m** : Both "A"&"B" are applied.
    - c. "A"&"B" are inspection holes .



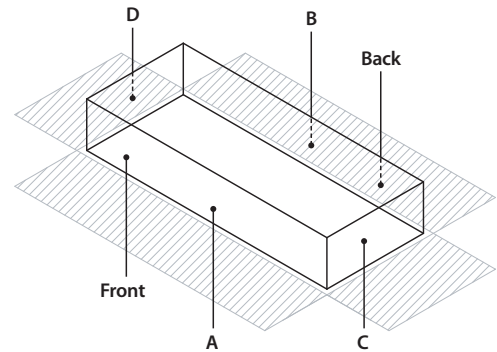
- You must have 20mm or more space between the ceiling and the bottom of indoor unit. Otherwise, the noise from the vibration of indoor unit may bother the user. When the ceiling is under construction, the hole for check-up must be made to take service, clean and repair the unit.
- It is possible to install the unit at an height of between 2.2~2.5m from the ground, if the unit has a duct with a well defined length (300mm or more), to avoid fan motor blower contact.
- If you install the cassette or duct type indoor unit on the ceiling with humidity over 80%, you must apply extra 10mm of polyethylene foam or other insulation with similar material on the body of the indoor unit.

# 10. Installation

## Home DUCT

### Insulation Guide

- ◆ Insulate the end of the pipe and some curved area by using separate insulator.
- ◆ Insulate the discharge and suction part at the same time when you insulate connection duct.
- ◆ If the humidity is over 80%, it is required to add 10mm polyethylene foam or other similar insulation to the indoor unit when installing belt or pipe type indoor unit on the ceiling.



Thickness: more than 10mm

Indoor unit		A	B	C	D	Front	Back
Slim Duct Home	1.7~3.6kW (700x199x440)	700x200	700x200	440x200	440x200	Insulate the front and back side in proper size at the same time when insulating the suction duct and discharge duct.	
Slim Duct	1.7~3.6kW (700x199x600)	700x200	700x200	600x200	600x200		
	4.5~5.6kW (900x199x600)	900x200	900x200	600x200	600x200		
	7.1kW (1100x199x600)	1100x200	1100x200	600x200	600x200		
	9.0~14.0kW (1300x295x690)	1300x300	1300x300	690x300	690x300		
Ma Duct	4.5~7.1kW (900x480x260)	900x260	900x260	480x260	480x260		
	9.0kW (1150x480x260)	1150x260	1150x260	480x260	480x260		
	11.2kW (1150x480x320)	1150x320	1150x320	480x320	480x320		
	12.8~16.0kW (1200x650x360)	1200x360	1200x360	650x360	650x360		
HSP Duct	11.2~14.0kW (1200x650x360)	1200x360	1200x360	650x360	650x360		
Home Duct1	4.5~5.6kw (900x199x440)	900x200	900x200	440x200	440x200		
Home Duct2	7.1kw (1100x199x440)	1100x200	1100x200	440x200	440x200		

# 10. Installation

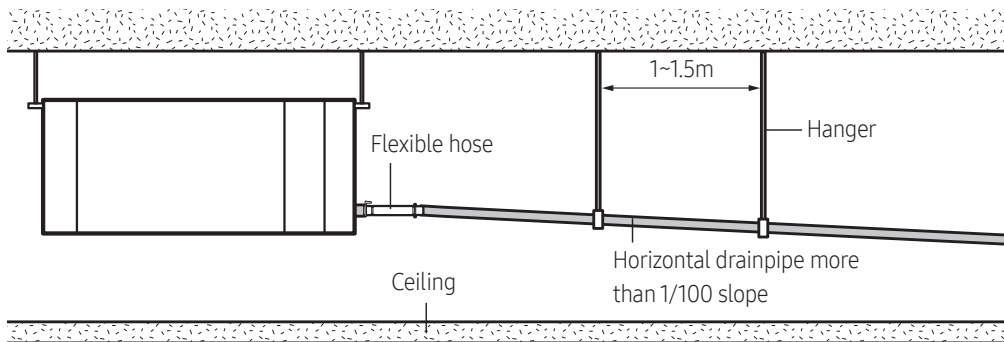
## Home DUCT

### Drainpipe and drain hose installation

#### Drainpipe Connection

##### Without the drain pump

1. Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
2. Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.
3. Do not install the drainpipe to upward position. It may cause water flow back to the unit.



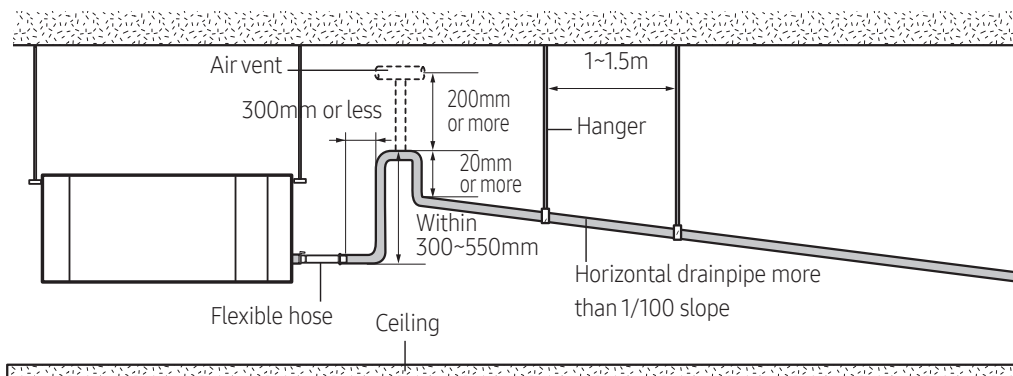
##### With the drain pump

1. The drain pipe should be installed within 300mm to 550mm from the flexible hose and then lift down 20mm or more.
2. Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
3. Install the air vent in the horizontal drainpipe to prevent water flow back to the indoor unit.



• You may not need to install it if there were proper slope in the horizontal drainpipe.

4. The flexible hose should not be installed upward position, it may cause water flow back to the indoor unit.





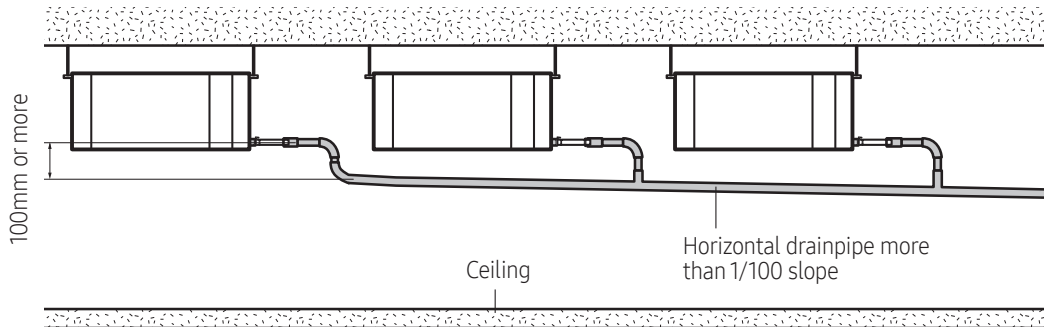
# 10. Installation

## Home DUCT

### Centralized Drainage

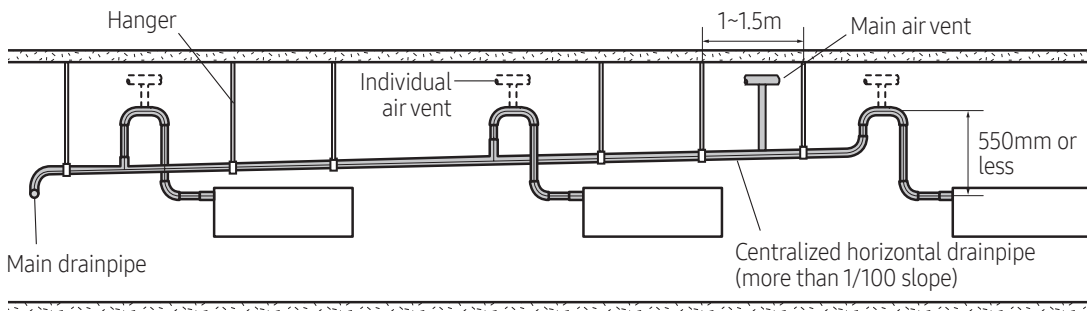
#### Without the drain pump

1. Install horizontal drainpipe with a slope of 1/100 or more and fix it by hanger space of 1.0~1.5m.
2. Install U-trap at the end of the drainpipe to prevent a nasty smell to reach the indoor unit.



#### With the drain pump

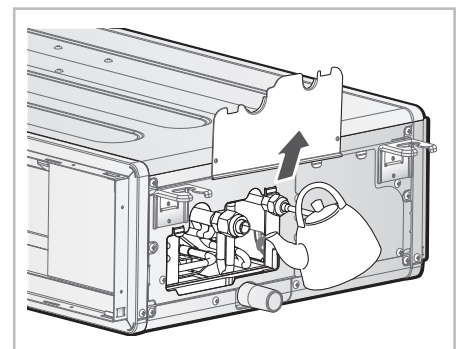
1. Install main air vent at the front of the farthest indoor unit from the main drain when installed indoor units are more than 3.
2. You may need to install individual air vent to prevent water flow back at the top of each indoor unit drainpipe.



### Testing the drainage

Prepare a little water about 2 liter.

1. Pour water into the base pan in the indoor unit as shown in figure.
2. Confirm that the water flows out through the drain hose.

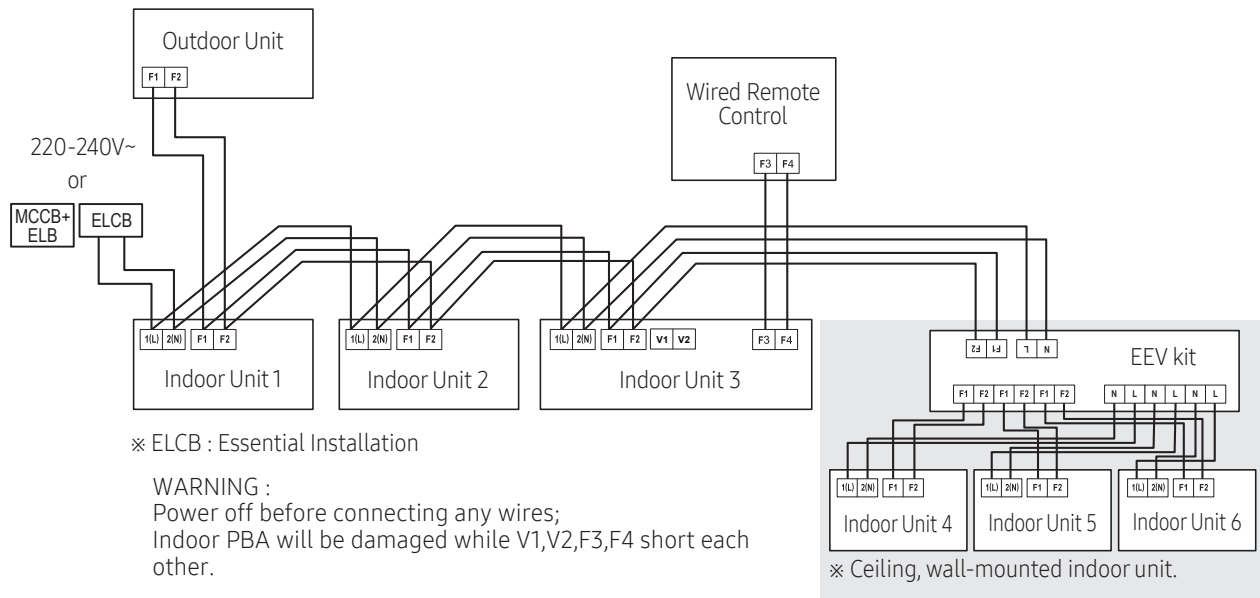


# 10. Installation

## Home DUCT

### Power and communication cable connection

1. Before wiring work, you must turn off all power source.
2. Indoor unit power should be supplied through the breaker( ELCB or MCCB+ELB ) separated by the outdoor power.  
ELCB:Earth Leakage Circuit Breaker  
MCCB:Molded Case Circuit Breaker  
ELB:Earth Leakage Breaker
3. The power cable should be used only copper wires.
4. Connect the power cable{1(L), 2(N)} among the units within maximum length and communication cable(F1, F2) each.
5. Connect F3, F4(for communication) when installing the wired remote control.



# 10. Installation

## Home DUCT

### Wiring Work

#### Specification of electronic wire

Power supply	MCCB	ELB or ELCB	Power cable	Earth cable	Communication cable
Max : 242V Min : 198V	X A	X A, 30mmA 0.1 s	2.5mm <sup>2</sup>	2.5mm <sup>2</sup>	0.75~1.5mm <sup>2</sup>

- ◆ Decide the capacity of ELCB(or MCCB+ELB) by below formula.
- ◆ Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F )

$$\text{The capacity of ELCB(or MCCB+ELB) X [A] = 1.25 X 1.1 X } \sum A_i$$

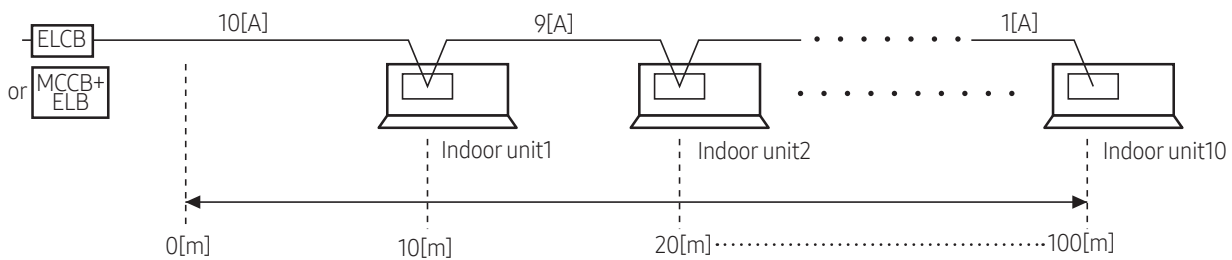
- ※ X : The capacity of ELCB(or MCCB+ELB).
- ※  $\sum A_i$  : Sum of Rating currents of each indoor unit.
- ※ Refer to each installation manual about the rating current of indoor unit.
- ◆ Decide the power cable specification and maximum length within 10% power drop among indoor units.

$$\sum_{k=1}^n \left( \frac{\text{Coef} \times 35.6 \times L_k \times i_k}{1000 \times A_k} \right) < 10\% \text{ of input voltage [V]}$$

※ coef: 1.55  
 ※ L<sub>k</sub>: Distance among each indoor unit[m], A<sub>k</sub>: Power cable specification[mm<sup>2</sup>]  
 i<sub>k</sub>: Running current of each unit[A]

#### Example of Installation

- Total power cable length L = 100(m), Running current of each units 1[A]
- Total 10 indoor units were installed



- ◆ Apply following equation.

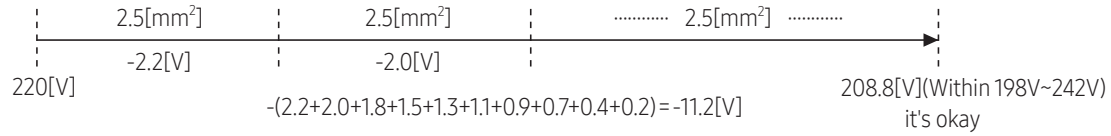
$$\sum \left( \frac{\text{Coef} \times 35.6 \times L_k \times i_k}{1000 \times A_k} \right) < 10\% \text{ of input voltage [V]}$$

# 10. Installation

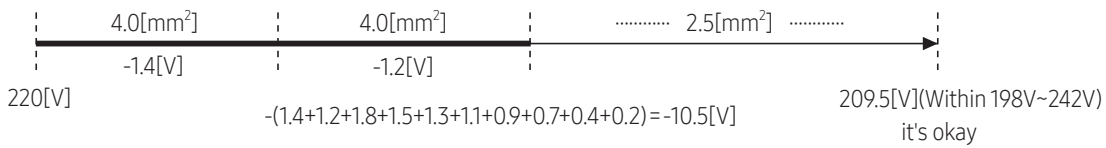
## Home DUCT

※ Calculation

- Installing with 1 sort wire.



- Installing with 2 different sort wire.

















※ Rating current

Unit	Model	Rating current	Unit	Model	Rating current	Unit	Model	Rating current
AM**FNLD*	*017*	0.30A	AM**NMD*	*022*	0.40A	AM**NHD*	*112*	2.35A
	*022*	0.30A		*028*	0.40A		*128*	2.58A
	*028*	0.32A		*036*	0.55A		*140*	3.00A
	*036*	0.33A		*045*	1.10A	AM**MNLD*	*045*	0.45A
AM***NLD*	*045*	0.52A	*056*	1.25A	*056*		0.62A	
	*056*	0.53A	*071*	1.30A	*071*		0.69A	
	*071*	0.60A	*090*	1.17A				
	*090*	0.96A	*112*	1.67A				
	*112*	1.28A	*128*	2.24A				
	*128*	1.43A	*140*					
	*140*		*160*					
AM**KNLD*	*017*	0.23A						
	*022*	0.25A						
	*028*	0.30A						
	*036*	0.35A						






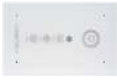
# 11. Accessory

## Controller

Classification	Product	Image	Model	Remark
Intergrated Management System	DMS 2.0		MIM-D00AN	
	DMS 2.5		MIM-D01AN	
	S-NET 3		MST-P3P	
Buiding Management System	BACnet G/W		MIM-B17N	
			MIM-B17BN	
	LONWORKS G/W		MIM-B18N	
			MIM-B18BN	
Centralized Control System	On/Off Controller		MCM-A202DN	
	Touch Controller		MCM-A300N	
	Wi-Fi Kit		MIM-H03N	
Individual Control System	Wireless remote Controller		AR-EH03E	Except for 360 Cassette
			MR-KH00E	360 Cassette Only
	Wired remote Controller		MWR-WE13N	
			MWR-SH00N	Simple Type
			MWR-SH10N	Touch Simple Type
Zone Control System	External room sensor		MRW-TS	

# 11. Accessory






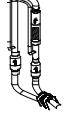
## Controller

Classification	Product	Image	Model	Remark
Others	External room sensor		MRW-TA	
	Compatible interface module		MIM-N01	
	External contact interface module		MIM-B14	
	Modbus Interface Module		MIM-B19N	
	S-Converter		MIM-C02N	
	Wireless signal receiver		MRK-A10N	Duct type only

- In case you want more information about the accessories, please refer to the control and accessories TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

# 11. Accessory

## Piping

Product	Image	Model	Remark
Y-Joint		MXJ-YA1509M	15.0 kW and below
		MXJ-YA2512M	Over 15.0 kW ~ 40.0 kW and below
		MXJ-YA2812M	Over 40.0 kW ~ 45.0 kW and below
		MXJ-YA2815M	Over 45.0 kW ~ 70.3 kW and below
		MXJ-YA3419M	Over 70.3 kW ~ 98.4 kW and below
		MXJ-YA4119M	Over 98.4 kW ~ 135.2 kW and below
		MXJ-YA4422M	Over 135.2 kW
Y-Joint (Only H/R)		MXJ-YA1500M	22.4 kW and below
		MXJ-YA2500M	Over 22.4 kW ~ 70.3 kW and below
		MXJ-YA3100M	Over 70.3 kW ~ 135.2 kW and below
		MXJ-YA3800M	Over 135.2 kW
Y-Joint Outdoor Unit		MXJ-TA3419M	135.2 kW and below
		MXJ-TA4122M	140.2 kW and Over
Y-Joint (Only H/R) Outdoor Unit		MXJ-TA3100M	135.2 kW and below
		MXJ-TA3800M	140.2 kW and Over
Distribution Header		MXJ-HA2512M	45.0 kW and below (for 4 rooms)
		MXJ-HA3115M	70.3 kW and below (for 8 rooms)
		MXJ-HA3819M	Over 70.3 kW ~ 135.2 kW and below (for 8 rooms)
MCU		MCU-S6NEE1N	~56 kW, ~6 indoor units
		MCU-S4NEE1N	~56 kW, ~4 indoor units
		MCU-S4NEE2N	~56 kW, ~6 indoor units
EEV KIT		MEV-E24SA	1 Indoor
		MEV-E32SA	
		MXD-E24K132A	2 Indoor
		MXD-E24K200A	
		MXD-E32K200A	
		MXD-E24K232A	3 Indoor
		MXD-E24K300A	
		MXD-E32K224A	
MXD-E32K300A			
PDM KIT		MXD-A38K2A	8~12 HP
		MXD-A12K2A	14~16 HP
		MXD-A58K2A	18~26 HP

### NOTE

- In case you want more information about the accessories, please refer to the control and accessories TDB on [pvi.Samsung.com](http://pvi.Samsung.com) site.

# 11. Accessory

Product	Image	Model	Remark			
ERV CO2 Sensor		MOS-C1	ERV, ERV PLUS			
External room sensor		MRW-TA	Cassette, Wall-mount, Ceiling, Duct, Console			
Drain Pump		MDP-N047SNC0D	OAP Duct (14.0 kW)			
		MDP-N047SNC1D	HSP Duct (22.0 / 28.0 kW) OAP Duct (22.4 / 28.0 kW)			
		MDP-M075S-GU1D	(9.2 / 11.2 kW)			
		MDP-M075S-GU2D	(12.8 / 14.0 kW) HSP Duct (11.2 / 12.8 / 14.0 kW)			
		MDP-M075S-GU3D	(5.6 / 7.1 kW)			
		MDP-E075SEE3D	Slim Duct (2.0~14.0 kW)			
		MDP-G075SP	Duct S (External, All Capacities)			
		MDP-G075SQ	Duct S (Internal, 3.5 kW~14 kW)			
AHU KIT		MXD-K025AN	7.0 kW~8.75 kW			
		MXD-K050AN	14.0 kW~17.5 kW			
		MXD-K075AN	21.0 kW~26.25 kW			
		MXD-K100AN	28.0 kW~35.0 kW			
		MCM-D201N	28kW~35kW	56kW~70kW	84kW~105kW	112kW~140kW
		MDX-A64K100E X 1 EA	MDX-A64K100E X 2 EA	MDX-A64K100E X 3 EA	MDX-A64K100E X 4 EA	

## NOTE

- In case you want more information about the accessories, please refer to the control and accessories TDB on [pvi.Samsung.com](http://pvi.Samsung.com) site.



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