

**SAMSUNG**

**VRF**

# Technical Data Book

**DVM S for Euro\_ET  
(R410A, 50Hz, HP)**



Model : Premium (Compact / Energy Efficiency) Type  
Standard Type

# History

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Version	Modification	Date	Remark
Ver. 1.0	Release DVM S (R410A, 50Hz, HP) for Euro_ET TDB	16.12.13	
Ver.1.01	Modify the Accessory Compatibility table for MCU kit (P.176)	17.09.13	
Ver.2.0	Updated Spec & Capacity data to meet the ErP standard	17.11.1	
Ver.2.1	Revised Sound Power & Weight data of 8/10/12HP	18.01.10	
Ver.2.2	Updated the Specification page	20.06.26	

# Nomenclature

## Outdoor Unit

### Model Name

AM

260

K

X

V

A

G

H

/

ET

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

Buyer

### (1) Classification

AM	DVM
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### (2) Capacity

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

F	2013
H	2014
J	2015
K	2016
M	2017

### (4) Product Type

X	Outdoor Unit
N	Indoor Unit

### (5) Feature 1

V	Inverter
M	DVM S Eco

### (6) Feature 2

A	Standard + General Temp.+ Module
H	High EER + Low Temp. + Module
G	High EER + General Temp. + Module
D	Standard + General Temp. + Non-Module

### (7) Rating Voltage

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

### (8) Mode

H	Heat Pump
R	Heat Recovery

# Features & Benefits

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Samsung's VRF system air conditioners offer instant temperature control, user-friendly installation and advanced functionality, along with smart power usage. Our flagship VRF-based Samsung DVM S is a highly innovative system that adopts the new third-generation Samsung Scroll Compressor (SSC) technology with Dual Digital Inverter. DVM S provides world-class energy efficiency and the most powerful cooling and heating performance available on the market. This ideal air conditioning system accommodates all variable environments, including large commercial or residential buildings.

Samsung DVM S offers innovative features to benefit the indoor comfort as well operational costs of the system through technological advances such as:



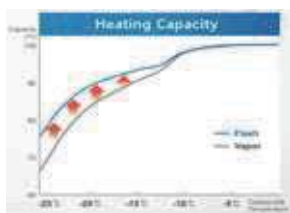
## Large capacity

Capacities of the outdoor units offer up to 30 HP rooftop space savings as well as lowering the installations and transportation costs.



## High seasonal energy efficiency

Samsung DVM S adopts a dual inverter scroll compressor that upgrades refrigerant flow and the motor's operating performance.



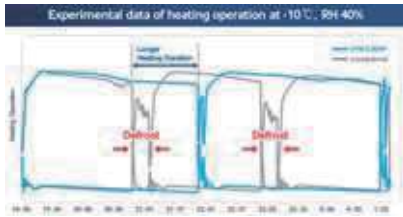
## Superior Heating Performance & Wide Operating Temperature Range with Flash injection

Increase refrigerant flow by 32%, extend heating operation range at -25°C, thanks to Flash Injection technology, extended compressor reliability range and control compression ratio.



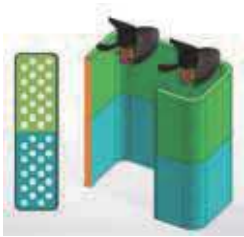
# Features & Benefits

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## Intelligent Defrosting Logic

DVM S Intelligent Defrost Control logic keeps the unit in the heating mode for up to 40% longer through out the heating season compared to conventional model by monitoring the air resistance through the heat exchanger.



## Optimised Heat Exchanger

Combination of optimised coil path and different types of fin design for upper and lower parts of the condenser evens out the airflow profile to optimise the heat transfer process.



## Extended Piping Length Limits

Allows extended piping length of up to 220 m, and units will still give a great performance over wide areas. With this technology, installation is available with a maximum height level of 110 m, which is equivalent to 20 stories (each story is considered 5 m high).



## Smart management

Further improves system's energy efficiency due to precise indoor climate control. Web-based remote monitoring and management system allows quick and easy HVAC control and breakdown alert.



## Eurovent Certified Performance

Samsung DVM S had become the 1st VRF Product to be certified by Eurovent, the European Committee of HVAC&R, in March 2014.

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## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM080JXVAGH/ET	AM100JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	8	10	12
	Capacity	Cooling (Rated)	kW	22.4	28.0	33.6
		Heating (Rated)	kW	22.4	28.0	33.6
		Heating (Max)	kW	25.2	31.5	37.8
Maximum number of connectable indoor units			EA	14	18	21
Total capacity of the connected Indoor Units		Min.	kW	11.2	14.0	16.8
		Max.	kW	29.1	36.4	43.7
Power	Power Input (Ducted)	Cooling (Rated)	kW	5.00	6.85	8.16
		Heating (Rated)	kW	4.53	5.91	7.13
		Heating (Max)	kW	5.43	7.08	8.54
	Power Input (Non-Ducted)	Cooling (Rated)	kW	6.10	9.56	10.77
		Heating (Rated)	kW	5.46	7.47	8.46
		Heating (Max)	kW	6.55	8.95	10.13
	Current Input (Ducted)	Cooling (Rated)	A	8.00	11.00	13.10
		Heating (Rated)	A	7.30	9.50	11.40
		Heating (Max)	A	8.70	11.40	13.70
	Current Input (Non-Ducted)	Cooling (Rated)	A	9.80	15.30	17.30
		Heating (Rated)	A	8.80	12.00	13.60
		Heating (Max)	A	10.50	14.40	16.20
	Current	Minimum Ssc	MVA	3.1	4.5	5.3
		MCA	A	18.0	21.1	25.0
		MFA	A	25	32	32
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	4.48	4.09	4.12
	COP (Ducted)	Heating (Rated)	W/W	4.94	4.74	4.71
		Heating (Max)	W/W	4.64	4.45	4.43
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.67	2.93	3.12
	COP (Non-Ducted)	Heating (Rated)	W/W	4.10	3.75	3.97
		Heating (Max)	W/W	3.85	3.52	3.73
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x1	Inverter Scroll x1	Inverter Scroll x1
	Output		kW x n	4.39 x1	6.39 x1	6.39 x1
	Model Name		-	DS-GA046FAV* x1	DS-GB066FAV* x1	DS-GB066FAV* x1
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	900 x1	1,100 x1	1,100 x1
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	1	1	1
	Air Flow Rate		m³/min	170	170	220
			l/s	2,833	2,833	3,667
	External Static Pressure	Max.	mmAq	8	8	8
			Pa	78.45	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	830 x1	830 x1	830 x1

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM080JXVAGH/ET	AM100JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, mm (inch)	9.52 (3/8)	9.52 (3/8)	12.70 (1/2)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, mm (inch)	19.05 (3/4)	22.22 (7/8)	28.58 (1-1/8)
	High pressure Gas Pipe(HR Only)		Type	-	-	-
			Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110	110
	Level difference (IDU in highest position)	Max.	m	110	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		kg	5.5	5.5	6.5
			tCO <sub>2</sub> e	11.48	11.48	13.57
Sound	Sound Pressure	Cooling	dB(A)	57	58	62
		Heating	dB(A)	59	60	64
	Sound Power		dB(A)	77	79	81
External Dimension	Net Weight		kg	186.0	197.0	210.0
	Shipping Weight		kg	193.0	204.0	217.0
	Net Dimensions (WxHxD)		mm	880 x 1,695 x 765	880 x 1,695 x 765	880 x 1,695 x 765
	Shipping Dimensions (WxHxD)		mm	948 x 1,887 x 832	948 x 1,887 x 832	948 x 1,887 x 832
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
  - 1) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
    - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
    - Equivalent refrigerant pipe length 5m, Level differences 0m
    - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
  - 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
  - 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  - 4) 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
  - 5) 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
  - 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
  - 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
  - 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
 

(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)

    - PDM kit: Pressure Drop Modulation kit

When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM140KXVAGH/ET	AM160KXVAGH/ET	AM180KXVAGH/ET
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	14	16	18
	Capacity	Cooling (Rated)	kW	40.0	45.0	50.4
		Heating (Rated)	kW	40.0	45.0	50.4
		Heating (Max)	kW	45.0	50.4	56.7
Maximum number of connectable indoor units			EA	26	29	32
Total capacity of the connected Indoor Units		Min.	kW	20.0	22.5	25.2
		Max.	kW	52.0	58.5	65.5
Power	Power Input (Ducted)	Cooling (Rated)	kW	10.93	11.63	13.64
		Heating (Rated)	kW	9.03	10.08	10.78
		Heating (Max)	kW	10.82	12.08	12.92
	Power Input (Non-Ducted)	Cooling (Rated)	kW	13.70	14.02	14.08
		Heating (Rated)	kW	10.58	12.75	12.76
		Heating (Max)	kW	12.68	15.27	15.28
	Current Input (Ducted)	Cooling (Rated)	A	17.50	18.70	21.90
		Heating (Rated)	A	14.50	16.20	17.30
		Heating (Max)	A	17.40	19.40	20.70
	Current Input (Non-Ducted)	Cooling (Rated)	A	22.00	22.50	22.60
		Heating (Rated)	A	17.00	20.40	20.50
		Heating (Max)	A	20.30	24.50	24.50
	Current	Minimum Ssc	MVA	5.4	7.2	8.8
		MCA	A	25.0	32.0	39.2
		MFA	A	32	40	50
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.66	3.87	3.70
	COP (Ducted)	Heating (Rated)	W/W	4.43	4.46	4.68
		Heating (Max)	W/W	4.16	4.17	4.39
	EER (Non-Ducted)	Cooling (Rated)	W/W	2.92	3.21	3.58
	COP (Non-Ducted)	Heating (Rated)	W/W	3.78	3.53	3.95
		Heating (Max)	W/W	3.55	3.30	3.71
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x1	Inverter Scroll x1	Inverter Scroll x1
	Output		kW x n	6.39 x1	7.81 x1	7.81 x1
	Model Name		-	DS-GB066FAV* x1	DS4GJ5080FV* x1	DS4GJ5080FV* x1
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	1,100 x1	1,400 x1	1,400 x1
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	2	2	2
	Air Flow Rate		m³/min	255	255	290
			l/s	4,250	4,250	4,833
	External Static Pressure	Max.	mmAq	8	8	8
			Pa	78.45	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	620 x 2	620 x 2	620 x 2

## 2. Specification

### Standard

Type			DVMS	DVMS	DVMS
Model Name			AM140KXVAGH/ET	AM160KXVAGH/ET	AM180KXVAGH/ET
	Outdoor unit module 1		-	-	-
	Outdoor unit module 2		-	-	-
	Outdoor unit module 3		-	-	-
	Outdoor unit module 4		-	-	-
Piping Connections	Liquid Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	12.70 (1/2)	12.70 (1/2)	15.88 (5/8)
	Gas Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	28.58 (1-1/8)	28.58 (1-1/8)	28.58 (1-1/8)
	High pressure Gas Pipe(HR Only)	Type	-	-	-
		Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75
		Remark	-	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant	Type	-	R410A	R410A
		Factory Charging	kg	7.7	8.4
			tCO <sub>2</sub> e	16.08	17.54
	Sound	Sound Pressure	Cooling	61	63
			Heating	63	67
		Sound Power	dB(A)	81	83
External Dimension	Net Weight		kg	226.0	253.0
	Shipping Weight		kg	246.0	273.0
	Net Dimensions (WxHxD)		mm	1,295 x 1,695 x 765	1,295 x 1,695 x 765
	Shipping Dimensions (WxHxD)		mm	1,363 x 1,887 x 832	1,363 x 1,887 x 832
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
  - 1) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
    - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
    - Equivalent refrigerant pipe length 5m, Level differences 0m
    - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
  - 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
  - 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  - 4) 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
  - 5) 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
  - 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
  - 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
  - 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.  
(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
    - PDM kit: Pressure Drop Modulation kit

When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.



## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM200KXVAGH/ET	AM220KXVAGH/ET	AM240KXVAGH/ET
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	20	22	24
	Capacity	Cooling (Rated)	kW	56.0	61.6	67.2
		Heating (Rated)	kW	56.0	58.0	67.2
		Heating (Max)	kW	63.0	69.3	75.6
Maximum number of connectable indoor units			EA	36	40	43
Total capacity of the connected Indoor Units		Min.	kW	28.0	30.8	33.6
		Max.	kW	72.8	80.1	87.4
Power	Power Input (Ducted)	Cooling (Rated)	kW	16.23	18.53	20.99
		Heating (Rated)	kW	12.17	12.89	14.91
		Heating (Max)	kW	14.58	16.94	17.86
	Power Input (Non-Ducted)	Cooling (Rated)	kW	18.36	21.39	20.06
		Heating (Rated)	kW	13.83	15.10	16.80
		Heating (Max)	kW	16.58	19.86	20.16
	Current Input (Ducted)	Cooling (Rated)	A	26.00	29.70	33.70
		Heating (Rated)	A	19.50	20.70	23.90
		Heating (Max)	A	23.40	27.20	28.60
	Current Input (Non-Ducted)	Cooling (Rated)	A	29.40	34.30	32.20
		Heating (Rated)	A	22.20	24.20	26.90
		Heating (Max)	A	26.60	31.90	32.30
	Current	Minimum Ssc	MVA	8.1	8.6	12.5
		MCA	A	42.0	44.6	55.0
		MFA	A	63	63	63
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.45	3.32	3.20
	COP (Ducted)	Heating (Rated)	W/W	4.60	4.50	4.51
		Heating (Max)	W/W	4.32	4.09	4.23
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.05	2.88	3.35
	COP (Non-Ducted)	Heating (Rated)	W/W	4.05	3.84	4.00
		Heating (Max)	W/W	3.80	3.49	3.75
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 2	Inverter Scroll x 2	Inverter Scroll x 2
	Output		kW x n	5.18 x 2	6.39 x 2	6.39 x 2
	Model Name		-	DS-GB052FAV* x 2	DS-GB066FAV* x 2	DS-GB066FAV* x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	1,100 x 2	1,100 x 2	1,100 x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	2	2	2
	Air Flow Rate		m³/min	290	290	340
			l/s	4,833	4,833	5,667
	External Static Pressure	Max.	mmAq	8	8	8
			Pa	78.45	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	620 x 2	620 x 2	620 x 2

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM200KXVAGH/ET	AM220KXVAGH/ET	AM240KXVAGH/ET
	Outdoor unit module 1			-	-	-
	Outdoor unit module 2			-	-	-
	Outdoor unit module 3			-	-	-
	Outdoor unit module 4			-	-	-
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, mm (inch)	15.88 (5/8)	15.88 (5/8)	15.88 (5/8)
	Gas Pipe		Type	Braze connection	Braze connection	Braze connection
			Φ, mm (inch)	28.58 (1-1/8)	28.58 (1-1/8)	34.92 (1-3/8)
	High pressure Gas Pipe(HR Only)		Type	-	-	-
			Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110	110
	Level difference (IDU in highest position)	Max.	m	110	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging		kg	8.4	8.4	14.0
			tCO <sub>2</sub> e	1754	1754	29.23
Sound	Sound Pressure	Cooling Heating	dB(A)	65	65	66
			dB(A)	67	67	69
	Sound Power		dB(A)	87	89	89
External Dimension	Net Weight		kg	282.0	290.0	342.0
	Shipping Weight		kg	302.0	310.0	364.0
	Net Dimensions (WxHxD)		mm	1,295 x 1,695 x 765	1,295 x 1,695 x 765	1,295 x 1,795 x 765
	Shipping Dimensions (WxHxD)		mm	1,363 x 1,887 x 832	1,363 x 1,887 x 832	1,363 x 1,987 x 832
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
  - 1) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
    - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
    - Equivalent refrigerant pipe length 5m, Level differences 0m
    - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
  - 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
  - 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  - 4) 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
  - 5) 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
  - 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
  - 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
  - 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
 

(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)

    - PDM kit: Pressure Drop Modulation kit

When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS	
Model Name				AM260KXVAGH/ET	AM280KXVAGH1ET	AM300KXVAGH1ET	
	Outdoor unit module 1			-	AM120JXVAGH/ET	AM120JXVAGH/ET	
	Outdoor unit module 2			-	AM160KXVAGH/ET	AM180KXVAGH/ET	
	Outdoor unit module 3			-	-	-	
	Outdoor unit module 4			-	-	-	
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50	
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	
Performance	HP		HP	26	28	30	
	Capacity	Cooling (Rated)	kW	72.8	78.6	84.0	
		Heating (Rated)	kW	72.8	78.6	84.0	
		Heating (Max)	kW	81.9	88.2	94.5	
Maximum number of connectable indoor units			EA	47	51	54	
Total capacity of the connected Indoor Units		Min.	kW	36.4	39.3	42.0	
		Max.	kW	94.6	102.2	109.2	
Power	Power Input (Ducted)	Cooling (Rated)	kW	22.47	19.79	21.80	
		Heating (Rated)	kW	16.51	17.21	17.91	
		Heating (Max)	kW	19.78	20.62	21.46	
		Power Input (Non-Ducted)	Cooling (Rated)	kW	23.26	24.79	24.85
			Heating (Rated)	kW	19.11	21.21	21.22
	Heating (Max)		kW	22.88	25.40	25.41	
	Current Input (Ducted)	Cooling (Rated)	A	36.00	31.80	35.00	
		Heating (Rated)	A	26.50	27.60	28.70	
		Heating (Max)	A	31.70	33.10	34.40	
	Current Input (Non-Ducted)	Cooling (Rated)	A	37.30	39.80	39.90	
		Heating (Rated)	A	30.60	34.00	34.10	
		Heating (Max)	A	36.70	40.70	40.70	
	Current	Minimum Ssc	MVA	12.2	12.5	14.1	
		MCA	A	60.0	57.0	64.2	
		MFA	A	75	75	75	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.24	3.97	3.85	
	COP (Ducted)	Heating (Rated)	W/W	4.41	4.57	4.69	
		Heating (Max)	W/W	4.14	4.28	4.40	
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.13	3.17	3.38	
	COP (Non-Ducted)	Heating (Rated)	W/W	3.81	3.71	3.96	
		Heating (Max)	W/W	3.58	3.47	3.72	
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube	
	Material	Fin	-	Al	Al	Al	
		Tube	-	Cu	Cu	Cu	
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion	
Compressor	Type		-	Inverter Scroll x 2	Inverter Scroll x 2	Inverter Scroll x 2	
	Output		kW x n	6.39 x 2	(6.39 x1) x1 + (7.81 x1) x1	(6.39 x1) x1 + (7.81 x1) x1	
	Model Name		-	DS-GB066FAV* x 2	(DS-GB066FAV* x1) x1 + (DS4GJ5080FV* x1) x1	(DS-GB066FAV* x1) x1 + (DS4GJ5080FV* x1) x1	
	Oil	Type	-	PVE	PVE	PVE	
		Initial charge	cc x n	1,100 x 2	(1,100 x1) x1 + (1,400 x1) x1	(1,100 x1) x1 + (1,400 x1) x1	
Fan	Type		-	Propeller	Propeller	Propeller	
	Discharge direction		-	Top	Top	Top	
	Quantity		EA	2	3	3	
	Air Flow Rate		m³/min	340	220 x1 + 255 x1	220 x1 + 290 x1	
			l/s	5,667	3,667 x1 + 4,250 x1	3,667 x1 + 4,833 x1	
	External Static Pressure	Max.	mmAq	8	8	8	
			Pa	78.45	78.45	78.45	
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	
	Output		W x n	620 x 2	(830 x1) x1 + (620 x2) x1	(830 x1) x1 + (620 x2) x1	

## 2. Specification

### Standard

Type			DVMS	DVMS	DVMS
Model Name			AM260KXVAGH/ET	AM280KXVAGH1ET	AM300KXVAGH1ET
Piping Connections	Outdoor unit module 1		-	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2		-	AM160KXVAGH/ET	AM180KXVAGH/ET
	Outdoor unit module 3		-	-	-
	Outdoor unit module 4		-	-	-
Piping Connections	Liquid Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	34.92 (1-3/8)	34.92 (1-3/8)	34.92 (1-3/8)
	High pressure Gas Pipe(HR Only)		Type	-	-
			Φ, mm (inch)	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75
		Remark	-	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
			-	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant		Type	R410A	R410A
	Factory Charging		kg	14.0	6.5 x 1 + 8.4 x 1
Sound			tCO <sub>2</sub> e	29.23	31.11
	Sound Pressure	Cooling	dB(A)	66	66
		Heating	dB(A)	69	69
	Sound Power		dB(A)	89	86
External Dimension	Net Weight		kg	350.0	210.0 x 1 + 253.0 x 1
	Shipping Weight		kg	372.0	217.0 x 1 + 273.0 x 1
	Net Dimensions (WxHxD)		mm	1,295 x 1,795 x 765	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 1
	Shipping Dimensions (WxHxD)		mm	1,363 x 1,987 x 832	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 1
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S	
Model Name				AM320KXVAGH1ET	AM340KXVAGH1ET	AM360KXVAGH1ET	
				Outdoor unit module 1	AM120JXVAGH/ET	AM120JXVAGH/ET	AM140KXVAGH/ET
				Outdoor unit module 2	AM200KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
				Outdoor unit module 3	-	-	-
				Outdoor unit module 4	-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50	
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	
Performance	HP		HP	32	34	36	
	Capacity	Cooling (Rated)	kW	89.6	95.2	101.6	
		Heating (Rated)	kW	89.6	91.6	98.0	
		Heating (Max)	kW	100.8	107.1	114.3	
Maximum number of connectable indoor units			EA	58	61	64	
Total capacity of the connected Indoor Units		Min.	kW	44.8	47.6	50.8	
		Max.	kW	116.5	123.8	132.1	
Power	Power Input (Ducted)	Cooling (Rated)	kW	24.39	26.69	29.46	
		Heating (Rated)	kW	19.30	20.02	21.92	
		Heating (Max)	kW	23.12	25.48	27.76	
	Power Input (Non-Ducted)	Cooling (Rated)	kW	29.13	32.16	35.09	
		Heating (Rated)	kW	22.29	23.56	25.68	
		Heating (Max)	kW	26.71	29.99	32.54	
	Current Input (Ducted)	Cooling (Rated)	A	39.10	42.80	47.20	
		Heating (Rated)	A	30.90	32.10	35.20	
		Heating (Max)	A	37.10	40.90	44.60	
	Current Input (Non-Ducted)	Cooling (Rated)	A	46.70	51.60	56.30	
		Heating (Rated)	A	35.80	37.80	41.20	
		Heating (Max)	A	42.80	48.10	52.20	
	Current	Minimum Ssc	MVA	13.4	13.9	14.0	
		MCA	A	670	69.6	69.6	
		MFA	A	75	80	80	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.67	3.57	3.45	
	COP (Ducted)	Heating (Rated)	W/W	4.64	4.58	4.47	
		Heating (Max)	W/W	4.36	4.20	4.12	
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.08	2.96	2.90	
	COP (Non-Ducted)	Heating (Rated)	W/W	4.02	3.89	3.82	
		Heating (Max)	W/W	3.77	3.57	3.51	
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube	
	Material	Fin	-	Al	Al	Al	
		Tube	-	Cu	Cu	Cu	
	Fin Treatment			-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 3	Inverter Scroll x 3	Inverter Scroll x 3	
	Output		kW x n	(6.39 x 1) x 1 + (5.18 x 2) x 1	(6.39 x 1) x 1 + (6.39 x 2) x 1	(6.39 x 1) x 1 + (6.39 x 2) x 1	
	Model Name		-	(DS-GB066FAV* x 1) x 1 + (DS-GB052FAV* x 2) x 1	(DS-GB066FAV* x 1) x 1 + (DS-GB066FAV* x 2) x 1	(DS-GB066FAV* x 1) x 1 + (DS-GB066FAV* x 2) x 1	
	Oil	Type	-	PVE	PVE	PVE	
		Initial charge	cc x n	(1,100 x 1) x 1 + (1,100 x 2) x 1	(1,100 x 1) x 1 + (1,100 x 2) x 1	(1,100 x 1) x 1 + (1,100 x 2) x 1	
Fan	Type		-	Propeller	Propeller	Propeller	
	Discharge direction		-	Top	Top	Top	
	Quantity		EA	3	3	4	
	Air Flow Rate		m³/min	220 x 1 + 290 x 1	220 x 1 + 290 x 1	255 x 1 + 290 x 1	
			l/s	3,667 x 1 + 4,833 x 1	3,667 x 1 + 4,833 x 1	4,250 x 1 + 4,833 x 1	
	External Static Pressure	Max.	mmAq	8	8	8	
			Pa	78.45	78.45	78.45	
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	
	Output		W x n	(830 x 1) x 1 + (620 x 2) x 1	(830 x 1) x 1 + (620 x 2) x 1	(620 x 2) x 2	

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM320KXVAGH1ET	AM340KXVAGH1ET	AM360KXVAGH1ET
Outdoor unit module 1				AM120JXVAGH/ET	AM120JXVAGH/ET	AM140KXVAGH/ET
Outdoor unit module 2				AM200KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
Outdoor unit module 3				-	-	-
Outdoor unit module 4				-	-	-
Piping Connections	Liquid Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		34.92 (1-3/8)	34.92 (1-3/8)	41.28 (1-5/8)
	High pressure Gas Pipe(HR Only)	Type		-	-	-
		Φ, mm (inch)		-	-	-
	Heat Insulation			Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake			Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant	Type	-	R410A	R410A	R410A
		Factory Charging	kg	6.5 x1 + 8.4 x1	6.5 x1 + 8.4 x1	7.7 x1 + 8.4 x1
			tCO <sub>2</sub> e	31.11	31.11	33.62
	Sound	Sound Pressure	Cooling	dB(A)	67	66
			Heating	dB(A)	69	68
		Sound Power		dB(A)	88	90
External Dimension	Net Weight		kg	210.0 x1 + 282.0 x1	210.0 x1 + 290.0 x1	226.0 x1 + 290.0 x1
	Shipping Weight		kg	217.0 x1 + 302.0 x1	217.0 x1 + 310.0 x1	246.0 x1 + 310.0 x1
	Net Dimensions (WxHxD)		mm	(880 x1,695 x 765) x1 + (1,295 x1,695 x 765) x1	(880 x1,695 x 765) x1 + (1,295 x1,695 x 765) x1	(1,295 x1,695 x 765) x2
	Shipping Dimensions (WxHxD)		mm	(948 x1,887 x 832) x1 + (1,363 x1,887 x 832) x1	(948 x1,887 x 832) x1 + (1,363 x1,887 x 832) x1	(1,363 x1,887 x 832) x2
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.



## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS	
Model Name				AM380KXVAGH1ET	AM400KXVAGH1ET	AM420KXVAGH1ET	
				Outdoor unit module 1	AM160KXVAGH/ET	AM180KXVAGH/ET	AM200KXVAGH/ET
				Outdoor unit module 2	AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
				Outdoor unit module 3	-	-	-
				Outdoor unit module 4	-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50	
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	
Performance	HP		HP	38	40	42	
	Capacity	Cooling (Rated)	kW	106.6	112.0	117.6	
		Heating (Rated)	kW	103.0	108.4	114.0	
		Heating (Max)	kW	119.7	126.0	132.3	
Maximum number of connectable indoor units			EA	64	64	64	
Total capacity of the connected Indoor Units		Min.	kW	53.3	56.0	58.8	
		Max.	kW	138.6	145.6	152.9	
Power	Power Input (Ducted)	Cooling (Rated)	kW	30.16	32.17	34.76	
		Heating (Rated)	kW	22.97	23.67	25.06	
		Heating (Max)	kW	29.02	29.86	31.52	
		Power Input (Non-Ducted)	Cooling (Rated)	kW	35.41	35.47	39.75
			Heating (Rated)	kW	27.85	27.86	28.93
	Heating (Max)		kW	35.13	35.14	36.44	
	Current Input (Ducted)	Cooling (Rated)	A	48.40	51.60	55.70	
		Heating (Rated)	A	36.90	38.00	40.20	
		Heating (Max)	A	46.60	47.90	50.60	
	Current Input (Non-Ducted)	Cooling (Rated)	A	56.80	56.90	63.70	
		Heating (Rated)	A	44.60	44.70	46.40	
		Heating (Max)	A	56.40	56.40	58.50	
	Current	Minimum Ssc	MVA	15.8	17.4	16.7	
		MCA	A	76.6	83.8	86.6	
		MFA	A	90	100	100	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.53	3.48	3.38	
	COP (Ducted)	Heating (Rated)	W/W	4.48	4.58	4.55	
		Heating (Max)	W/W	4.12	4.22	4.20	
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.01	3.16	2.96	
	COP (Non-Ducted)	Heating (Rated)	W/W	3.70	3.89	3.94	
		Heating (Max)	W/W	3.41	3.59	3.63	
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
	Type	-	Fin & Tube	Fin & Tube	Fin & Tube		
Heat Exchanger	Material	Fin	-	Al	Al	Al	
		Tube	-	Cu	Cu	Cu	
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion	
Compressor	Type		-	Inverter Scroll x 3	Inverter Scroll x 3	Inverter Scroll x 4	
	Output		kW x n	(7.81 x 1) x 1 + (6.39 x 2) x 1	(7.81 x 1) x 1 + (6.39 x 2) x 1	(5.18 x 2) x 1 + (6.39 x 2) x 1	
	Model Name		-	(DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 1	(DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 1	(DS-GB052FAV* x 2) x 1 + (DS-GB066FAV* x 2) x 1	
	Oil	Type	-	PVE	PVE	PVE	
		Initial charge	cc x n	(1,400 x 1) x 1 + (1,100 x 2) x 1	(1,400 x 1) x 1 + (1,100 x 2) x 1	(1,100 x 2) x 2	
Fan	Type		-	Propeller	Propeller	Propeller	
	Discharge direction		-	Top	Top	Top	
	Quantity		EA	4	4	4	
	Air Flow Rate		m³/min	255 x 1 + 290 x 1	290 x 2	290 x 2	
			l/s	4,250 x 1 + 4,833 x 1	4,833 x 2	4,833 x 2	
	External Static Pressure	Max.	mmAq	8	8	8	
			Pa	78.45	78.45	78.45	
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	
	Output		W x n	(620 x 2) x 2	(620 x 2) x 2	(620 x 2) x 2	

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM380KXVAGH1ET	AM400KXVAGH1ET	AM420KXVAGH1ET
Outdoor unit module 1				AM160KXVAGH/ET	AM180KXVAGH/ET	AM200KXVAGH/ET
Outdoor unit module 2				AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
Outdoor unit module 3				-	-	-
Outdoor unit module 4				-	-	-
Piping Connections	Liquid Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		41.28 (1-5/8)	41.28 (1-5/8)	41.28 (1-5/8)
	High pressure Gas Pipe(HR Only)	Type		-	-	-
		Φ, mm (inch)		-	-	-
	Heat Insulation			Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake			Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant					
	Type		-	R410A	R410A	R410A
	Factory Charging	kg		8.4 x 2	8.4 x 2	8.4 x 2
		tCO <sub>2</sub> e		35.08	35.08	35.08
Sound	Sound Pressure	Cooling	dB(A)	67	68	68
		Heating	dB(A)	70	70	70
	Sound Power		dB(A)	90	90	91
External Dimension	Net Weight		kg	253.0 x1 + 290.0 x1	255.0 x1 + 290.0 x1	282.0 x1 + 290.0 x1
	Shipping Weight		kg	273.0 x1 + 310.0 x1	275.0 x1 + 310.0 x1	302.0 x1 + 310.0 x1
	Net Dimensions (WxHxD)		mm	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 2
	Shipping Dimensions (WxHxD)		mm	(1,363 x 1,887 x 832) x 2	(1,363 x 1,887 x 832) x 2	(1,363 x 1,887 x 832) x 2
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24	-25 ~ 24

### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
  - 1) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
    - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
    - Equivalent refrigerant pipe length 5m, Level differences 0m
    - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
  - 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
  - 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  - 4) 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
  - 5) 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
  - 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
  - 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
  - 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.  
(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
    - PDM kit: Pressure Drop Modulation kit

When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S	
Model Name				AM440KXVAGH1ET	AM460KXVAGH1ET	AM480KXVAGH1ET	
				Outdoor unit module 1	AM220KXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
				Outdoor unit module 2	AM220KXVAGH/ET	AM120JXVAGH/ET	AM140KXVAGH/ET
				Outdoor unit module 3	-	AM220KXVAGH/ET	AM220KXVAGH/ET
				Outdoor unit module 4	-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50	
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	
Performance	HP		HP	44	46	48	
	Capacity	Cooling (Rated)	kW	123.2	128.8	135.2	
		Heating (Rated)	kW	116.0	125.2	131.6	
		Heating (Max)	kW	138.6	144.9	152.1	
Maximum number of connectable indoor units			EA	64	64	64	
Total capacity of the connected Indoor Units		Min.	kW	61.6	64.4	67.6	
		Max.	kW	160.2	167.4	175.8	
Power	Power Input (Ducted)	Cooling (Rated)	kW	37.06	34.85	37.62	
		Heating (Rated)	kW	25.78	27.15	29.05	
		Heating (Max)	kW	33.88	34.02	36.30	
		Power Input (Non-Ducted)	Cooling (Rated)	kW	42.78	42.93	45.86
			Heating (Rated)	kW	30.20	32.02	34.14
	Heating (Max)		kW	39.72	40.12	42.67	
	Current Input (Ducted)	Cooling (Rated)	A	59.40	55.90	60.30	
		Heating (Rated)	A	41.40	43.50	46.60	
		Heating (Max)	A	54.40	54.60	58.30	
	Current Input (Non-Ducted)	Cooling (Rated)	A	68.60	68.90	73.60	
		Heating (Rated)	A	48.40	51.40	54.80	
		Heating (Max)	A	63.80	64.30	68.40	
	Current	Minimum Ssc	MVA	17.2	19.2	19.3	
		MCA	A	89.2	94.6	94.6	
		MFA	A	100	125	125	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.32	3.70	3.59	
	COP (Ducted)	Heating (Rated)	W/W	4.50	4.61	4.53	
		Heating (Max)	W/W	4.09	4.26	4.19	
	EER (Non-Ducted)	Cooling (Rated)	W/W	2.88	3.00	2.95	
	COP (Non-Ducted)	Heating (Rated)	W/W	3.84	3.91	3.85	
Heating (Max)		W/W	3.49	3.61	3.56		
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Type	-	Fin & Tube	Fin & Tube	Fin & Tube	
Heat Exchanger	Material	Fin	-	Al	Al	Al	
		Tube	-	Cu	Cu	Cu	
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion	
Compressor	Type		-	Inverter Scroll x 4	Inverter Scroll x 4	Inverter Scroll x 4	
	Output		kW x n	(6.39 x 2) x 2	(6.39 x1) x 2 + (6.39 x 2) x1	(6.39 x1) x 2 + (6.39 x 2) x1	
	Model Name		-	(DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x1) x 2 + (DS-GB066FAV* x 2) x1	(DS-GB066FAV* x1) x 2 + (DS-GB066FAV* x 2) x1	
	Oil	Type	-	PVE	PVE	PVE	
Initial charge		cc x n	(1,100 x 2) x 2	(1,100 x1) x 2 + (1,100 x 2) x1	(1,100 x1) x 2 + (1,100 x 2) x1		
Fan	Type		-	Propeller	Propeller	Propeller	
	Discharge direction		-	Top	Top	Top	
	Quantity		EA	4	4	5	
	Air Flow Rate		m³/min	290 x 2	220 x 2 + 290 x1	220 x1 + 255 x1 + 290 x1	
			l/s	4,833 x 2	3,667 x 2 + 4,833 x1	3,667 x1 + 4,250 x1 + 4,833 x1	
	External Static Pressure	Max.	mmAq	8	8	8	
Pa			78.45	78.45	78.45		
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor	
	Output		W x n	(620 x 2) x 2	(830 x1) x 2 + (620 x 2) x1	(830 x1) x1 + (620 x 2) x 2	

## 2. Specification

### Standard

Type			DVMS	DVMS	DVMS
Model Name			AM440KXVAGH1ET	AM460KXVAGH1ET	AM480KXVAGH1ET
	Outdoor unit module 1		AM220KXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2		AM220KXVAGH/ET	AM120JXVAGH/ET	AM140KXVAGH/ET
	Outdoor unit module 3		-	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4		-	-	-
Piping Connections	Liquid Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	41.28 (1-5/8)	41.28 (1-5/8)	41.28 (1-5/8)
	High pressure Gas Pipe(HR Only)	Type	-	-	-
		Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75
		Remark	-	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant		-	R410A	R410A
	Factory Charging	kg	8.4 x 2	6.5 x 2 + 8.4 x 1	6.5 x 1 + 7.7 x 1 + 8.4 x 1
		tCO <sub>2</sub> e	35.08	44.68	47.19
	Sound		-	-	-
Sound	Sound Pressure	Cooling	dB(A)	68	68
		Heating	dB(A)	70	70
	Sound Power		dB(A)	92	90
	External Dimension		-	-	-
External Dimension	Net Weight		kg	290.0 x 2	210.0 x 2 + 290.0 x 1
	Shipping Weight		kg	310.0 x 2	217.0 x 2 + 310.0 x 1
	Net Dimensions (WxHxD)		mm	(1,295 x 1,695 x 765) x 2	(880 x 1,695 x 765) x 2 + (1,295 x 1,695 x 765) x 1
	Shipping Dimensions (WxHxD)		mm	(1,363 x 1,887 x 832) x 2	(948 x 1,887 x 832) x 2 + (1,363 x 1,887 x 832) x 1
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM500KXVAGH1ET	AM520KXVAGH1ET	AM540KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM160KXVAGH/ET	AM180KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	50	52	54
	Capacity	Cooling (Rated)	kW	140.2	145.6	151.2
		Heating (Rated)	kW	136.6	142.0	147.6
		Heating (Max)	kW	157.5	163.8	170.1
Maximum number of connectable indoor units			EA	64	64	
Total capacity of the connected Indoor Units			Min.	kW	70.1	72.8
			Max.	kW	182.3	189.3
Power	Power Input (Ducted)	Cooling (Rated)	kW	38.32	40.33	42.92
		Heating (Rated)	kW	30.10	30.80	32.19
		Heating (Max)	kW	37.56	38.40	40.06
	Power Input (Non-Ducted)	Cooling (Rated)	kW	46.18	46.24	50.52
		Heating (Rated)	kW	36.31	36.32	37.39
		Heating (Max)	kW	45.26	45.27	46.57
	Current Input (Ducted)	Cooling (Rated)	A	61.50	64.70	68.80
		Heating (Rated)	A	48.30	49.40	51.60
		Heating (Max)	A	60.30	61.60	64.30
	Current Input (Non-Ducted)	Cooling (Rated)	A	74.10	74.20	81.00
		Heating (Rated)	A	58.20	58.30	60.00
		Heating (Max)	A	72.60	72.60	74.70
	Current	Minimum Ssc	MVA	21.1	22.7	22.0
		MCA	A	101.6	108.8	111.6
		MFA	A	125	125	125
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.66	3.61	3.52
	COP (Ducted)	Heating (Rated)	W/W	4.54	4.61	4.59
		Heating (Max)	W/W	4.19	4.27	4.25
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.04	3.15	2.99
	COP (Non-Ducted)	Heating (Rated)	W/W	3.76	3.91	3.95
		Heating (Max)	W/W	3.48	3.62	3.65
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment			-	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 4	Inverter Scroll x 4	Inverter Scroll x 5
	Output		kW x n	(6.39 x1) x1 + (7.81 x1) x1 + (6.39 x2) x1	(6.39 x1) x1 + (7.81 x1) x1 + (6.39 x2) x1	(6.39 x1) x1 + (5.18 x2) x1 + (6.39 x2) x1
	Model Name		-	(DS-GB066FAV* x1) x1 + (DS4GJ5080FV* x1) x1 + (DS-GB066FAV* x2) x1	(DS-GB066FAV* x1) x1 + (DS4GJ5080FV* x1) x1 + (DS-GB066FAV* x2) x1	(DS-GB066FAV* x1) x1 + (DS-GB052FAV* x2) x1 + (DS-GB066FAV* x2) x1
	Oil	Type	-	PVE	PVE	PVE
Initial charge		cc x n	(1,100 x1) x1 + (1,400 x1) x1 + (1,100 x2) x1	(1,100 x1) x1 + (1,400 x1) x1 + (1,100 x2) x1	(1,100 x1) x1 + (1,100 x2) x2	
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	5	5	5
	Air Flow Rate		m³/min	220 x1 + 255 x1 + 290 x1	220 x1 + 290 x2	220 x1 + 290 x2
			l/s	3,667 x1 + 4,250 x1 + 4,833 x1	3,667 x1 + 4,833 x2	3,667 x1 + 4,833 x2
	External Static Pressure	Max.	mmAq	8	8	8
Pa			78.45	78.45	78.45	
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(830 x1) x1 + (620 x2) x2	(830 x1) x1 + (620 x2) x2	(830 x1) x1 + (620 x2) x2

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM500KXVAGH1ET	AM520KXVAGH1ET	AM540KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM160KXVAGH/ET	AM180KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			-	-	-
Piping Connections	Liquid Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		41.28 (1-5/8)	41.28 (1-5/8)	41.28 (1-5/8)
	High pressure Gas Pipe(HR Only)	Type		-	-	-
		Φ, mm (inch)		-	-	-
	Heat Insulation			Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake			Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant			R410A	R410A	R410A
	Factory Charging			6.5 x 1 + 8.4 x 2	6.5 x 1 + 8.4 x 2	6.5 x 1 + 8.4 x 2
Sound	Sound Pressure	Cooling	dB(A)	68	69	69
		Heating	dB(A)	71	71	71
		Sound Power	dB(A)	90	91	92
	External Dimension					
Operating Temp. Range	Net Weight			210.0 x 1 + 253.0 x 1 + 290.0 x 1	210.0 x 1 + 255.0 x 1 + 290.0 x 1	210.0 x 1 + 282.0 x 1 + 290.0 x 1
	Shipping Weight			217.0 x 1 + 273.0 x 1 + 310.0 x 1	217.0 x 1 + 275.0 x 1 + 310.0 x 1	217.0 x 1 + 302.0 x 1 + 310.0 x 1
	Net Dimensions (WxHxD)			(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 2	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 2	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 2
	Shipping Dimensions (WxHxD)			(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 2	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 2	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 2
Operating Temp. Range	Cooling			-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating			-25 ~ 24	-25 ~ 24	-25 ~ 24



#### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.



## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S	
Model Name				AM560KXVAGH1ET	AM580KXVAGH1ET	AM600KXVAGH1ET	
	Outdoor unit module 1			AM120JXVAGH/ET	AM140KXVAGH/ET	AM160KXVAGH/ET	
	Outdoor unit module 2			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET	
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET	
	Outdoor unit module 4			-	-	-	
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50	
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP	
Performance	HP		HP	56	58	60	
	Capacity	Cooling (Rated)	kW	156.8	163.2	168.2	
		Heating (Rated)	kW	149.6	156.0	161.0	
		Heating (Max)	kW	176.4	183.6	189.0	
Maximum number of connectable indoor units			EA	64	64	64	
Total capacity of the connected Indoor Units		Min.	kW	78.4	81.6	84.1	
		Max.	kW	203.8	212.2	218.7	
Power	Power Input (Ducted)	Cooling (Rated)	kW	45.22	47.99	48.69	
		Heating (Rated)	kW	32.91	34.81	35.86	
		Heating (Max)	kW	42.42	44.70	45.96	
		Power Input (Non-Ducted)	Cooling (Rated)	kW	53.55	56.48	56.80
			Heating (Rated)	kW	38.66	40.78	42.95
	Heating (Max)		kW	49.85	52.40	54.99	
	Current Input (Ducted)	Cooling (Rated)	A	72.50	76.90	78.10	
		Heating (Rated)	A	52.80	55.90	57.60	
		Heating (Max)	A	68.10	71.80	73.80	
	Current Input (Non-Ducted)	Cooling (Rated)	A	85.90	90.60	91.10	
		Heating (Rated)	A	62.00	65.40	68.80	
		Heating (Max)	A	80.00	84.10	88.30	
	Current	Minimum Ssc	MVA	22.5	22.6	24.4	
		MCA	A	114.2	114.2	121.2	
		MFA	A	150	150	150	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.47	3.40	3.45	
	COP (Ducted)	Heating (Rated)	W/W	4.55	4.48	4.49	
		Heating (Max)	W/W	4.16	4.11	4.11	
	EER (Non-Ducted)	Cooling (Rated)	W/W	2.93	2.89	2.96	
	COP (Non-Ducted)	Heating (Rated)	W/W	3.87	3.83	3.75	
		Heating (Max)	W/W	3.54	3.50	3.44	
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate	
Heat Exchanger	Type	-	-	Fin & Tube	Fin & Tube	Fin & Tube	
	Material	Fin	-	Al	Al	Al	
		Tube	-	Cu	Cu	Cu	
	Fin Treatment	-	-	Anti-corrosion	Anti-corrosion	Anti-corrosion	
Compressor	Type	-	-	Inverter Scroll x 5	Inverter Scroll x 5	Inverter Scroll x 5	
	Output	-	kW x n	(6.39 x 1) x 1 + (6.39 x 2) x 2	(6.39 x 1) x 1 + (6.39 x 2) x 2	(7.81 x 1) x 1 + (6.39 x 2) x 2	
	Model Name	-	-	(DS-GB066FAV* x 1) x 1 + (DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x 1) x 1 + (DS-GB066FAV* x 2) x 2	(DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 2	
	Oil	Type	-	PVE	PVE	PVE	
		Initial charge	cc x n	(1,100 x 1) x 1 + (1,100 x 2) x 2	(1,100 x 1) x 1 + (1,100 x 2) x 2	(1,400 x 1) x 1 + (1,100 x 2) x 2	
Fan	Type	-	-	Propeller	Propeller	Propeller	
	Discharge direction	-	-	Top	Top	Top	
	Quantity	-	EA	5	6	6	
	Air Flow Rate	-	m³/min	220 x1 + 290 x 2	255 x1 + 290 x 2	255 x1 + 290 x 2	
		-	l/s	3,667 x1 + 4,833 x 2	4,250 x1 + 4,833 x 2	4,250 x1 + 4,833 x 2	
	External Static Pressure	Max.	mmAq	8	8	8	
			Pa	78.45	78.45	78.45	
Fan Motor	Type	-	-	BLDC Motor	BLDC Motor	BLDC Motor	
	Output	-	W x n	(830 x 1) x 1 + (620 x 2) x 2	(620 x 2) x 3	(620 x 2) x 3	

## 2. Specification

### Standard

Type			DVMS	DVMS	DVMS
Model Name			AM560KXVAGH1ET	AM580KXVAGH1ET	AM600KXVAGH1ET
	Outdoor unit module 1		AM120JXVAGH/ET	AM140KXVAGH/ET	AM160KXVAGH/ET
	Outdoor unit module 2		AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 3		AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4		-	-	-
Piping Connections	Liquid Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	19.05 (3/4)	19.05 (3/4)	19.05 (3/4)
	Gas Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	41.28 (1-5/8)	41.28 (1-5/8)	41.28 (1-5/8)
	High pressure Gas Pipe(HR Only)	Type	-	-	-
		Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75
		Remark	-	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
	Refrigerant		-	R410A	R410A
	Factory Charging		kg	6.5 x 1 + 8.4 x 2	8.4 x 3
Sound			tCO <sub>2</sub> e	48.65	52.62
	Sound Pressure	Cooling	dB(A)	69	69
		Heating	dB(A)	71	72
	Sound Power		dB(A)	92	93
External Dimension	Net Weight		kg	210.0 x 1 + 290.0 x 2	253.0 x 1 + 290.0 x 2
	Shipping Weight		kg	217.0 x 1 + 310.0 x 2	273.0 x 1 + 310.0 x 2
	Net Dimensions (WxHxD)		mm	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 2	(1,295 x 1,695 x 765) x 3
	Shipping Dimensions (WxHxD)		mm	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 2	(1,363 x 1,887 x 832) x 3
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM620KXVAGH1ET	AM640KXVAGH1ET	AM660KXVAGH1ET
	Outdoor unit module 1			AM180KXVAGH/ET	AM200KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 2			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			-	-	-
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	62	64	66
	Capacity	Cooling (Rated)	kW	173.6	179.2	184.8
		Heating (Rated)	kW	166.4	172.0	174.0
		Heating (Max)	kW	195.3	201.6	207.9
Maximum number of connectable indoor units			EA	64	64	64
Total capacity of the connected Indoor Units		Min.	kW	86.8	89.6	92.4
		Max.	kW	225.7	233.0	240.2
Power	Power Input (Ducted)	Cooling (Rated)	kW	50.70	53.29	55.59
		Heating (Rated)	kW	36.56	37.95	38.67
		Heating (Max)	kW	46.80	48.46	50.82
	Power Input (Non-Ducted)	Cooling (Rated)	kW	56.86	61.14	64.17
		Heating (Rated)	kW	42.96	44.03	45.30
		Heating (Max)	kW	55.00	56.30	59.58
	Current Input (Ducted)	Cooling (Rated)	A	81.30	85.40	89.10
		Heating (Rated)	A	58.70	60.90	62.10
		Heating (Max)	A	75.10	77.80	81.60
	Current Input (Non-Ducted)	Cooling (Rated)	A	91.20	98.00	102.90
		Heating (Rated)	A	68.90	70.60	72.60
		Heating (Max)	A	88.30	90.40	95.70
	Current	Minimum Ssc	MVA	26.0	25.3	25.8
		MCA	A	128.4	131.2	133.8
		MFA	A	150	150	150
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.42	3.36	3.32
	COP (Ducted)	Heating (Rated)	W/W	4.55	4.53	4.50
		Heating (Max)	W/W	4.17	4.16	4.09
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.05	2.93	2.88
	COP (Non-Ducted)	Heating (Rated)	W/W	3.87	3.91	3.84
		Heating (Max)	W/W	3.55	3.58	3.49
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 5	Inverter Scroll x 6	Inverter Scroll x 6
	Output		kW x n	(7.81 x 1) x 1 + (6.39 x 2) x 2	(5.18 x 2) x 1 + (6.39 x 2) x 2	(6.39 x 2) x 3
	Model Name		-	(DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 2	(DS-GB052FAV* x 2) x 1 + (DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x 2) x 3
	Oil	Type	-	PVE	PVE	PVE
Initial charge		cc x n	(1,400 x 1) x 1 + (1,100 x 2) x 2	(1,100 x 2) x 3	(1,100 x 2) x 3	
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	6	6	6
	Air Flow Rate		m³/min	290 x 3	290 x 3	290 x 3
			l/s	4,833 x 3	4,833 x 3	4,833 x 3
	External Static Pressure	Max.	mmAq	8	8	8
			Pa	78.45	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(620 x 2) x 3	(620 x 2) x 3	(620 x 2) x 3

## 2. Specification

### Standard

Type			DVMS	DVMS	DVMS
Model Name			AM620KXVAGH1ET	AM640KXVAGH1ET	AM660KXVAGH1ET
	Outdoor unit module 1		AM180KXVAGH/ET	AM200KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 2		AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 3		AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4		-	-	-
Piping Connections	Liquid Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	22.22 (7/8)	22.22 (7/8)	22.22 (7/8)
	Gas Pipe	Type	Braze connection	Braze connection	Braze connection
		Φ, mm (inch)	53.98 (2-1/8)	53.98 (2-1/8)	53.98 (2-1/8)
	High pressure Gas Pipe(HR Only)	Type	-	-	-
		Φ, mm (inch)	-	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110
	Level difference (IDU in highest position)	Max.	m	110	110
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75
		Remark	-	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
			-	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A
	Factory Charging		kg	8.4 x 3	8.4 x 3
			tCO <sub>2</sub> e	52.62	52.62
Sound	Sound Pressure	Cooling	dB(A)	69	70
		Heating	dB(A)	72	72
	Sound Power		dB(A)	93	94
External Dimension	Net Weight		kg	255.0 x 1 + 290.0 x 2	290.0 x 3
	Shipping Weight		kg	275.0 x 1 + 310.0 x 2	310.0 x 3
	Net Dimensions (WxHxD)		mm	(1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 3
	Shipping Dimensions (WxHxD)		mm	(1,363 x 1,887 x 832) x 3	(1,363 x 1,887 x 832) x 3
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



#### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
  - 1) Performances are based on the following test conditions.
    - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
    - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
    - Equivalent refrigerant pipe length 5m, Level differences 0m
    - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
  - 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
  - 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
  - 4) 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
  - 5) 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
  - 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
  - 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
  - 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
 

(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)

    - PDM kit: Pressure Drop Modulation kit

When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S	DVM S	DVM S
Model Name				AM680KXVAGH1ET	AM700KXVAGH1ET	AM720KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM120JXVAGH/ET	AM140KXVAGH/ET	AM160KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP		HP	68	70	72
	Capacity	Cooling (Rated)	kW	190.4	196.8	201.8
		Heating (Rated)	kW	183.2	189.6	194.6
		Heating (Max)	kW	214.2	221.4	226.8
Maximum number of connectable indoor units			EA	64	64	
Total capacity of the connected Indoor Units			Min.	kW	95.2	100.9
			Max.	kW	247.5	255.8
Power	Power Input (Ducted)	Cooling (Rated)	kW	53.38	56.15	56.85
		Heating (Rated)	kW	40.04	41.94	42.99
		Heating (Max)	kW	50.96	53.24	54.50
	Power Input (Non-Ducted)	Cooling (Rated)	kW	64.32	67.25	67.57
		Heating (Rated)	kW	47.12	49.24	51.41
		Heating (Max)	kW	59.98	62.53	65.12
	Current Input (Ducted)	Cooling (Rated)	A	85.60	90.00	91.20
		Heating (Rated)	A	64.20	67.30	69.00
		Heating (Max)	A	81.80	85.50	87.50
	Current Input (Non-Ducted)	Cooling (Rated)	A	103.20	107.90	108.40
		Heating (Rated)	A	75.60	79.00	82.40
		Heating (Max)	A	96.20	100.30	104.50
	Current	Minimum Ssc	MVA	27.8	27.9	29.7
		MCA	A	139.2	139.2	146.2
MFA		A	175	175	175	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.57	3.50	3.55
	COP (Ducted)	Heating (Rated)	W/W	4.58	4.52	4.53
		Heating (Max)	W/W	4.20	4.16	4.16
	EER (Non-Ducted)	Cooling (Rated)	W/W	2.96	2.93	2.99
	COP (Non-Ducted)	Heating (Rated)	W/W	3.89	3.85	3.79
		Heating (Max)	W/W	3.57	3.54	3.48
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al	Al
		Tube	-	Cu	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6	Inverter Scroll x 6	Inverter Scroll x 6
	Output		kW x n	(6.39 x 1) x 2 + (6.39 x 2) x 2	(6.39 x 1) x 2 + (6.39 x 2) x 2	(6.39 x 1) x 1 + (7.81 x 1) x 1 + (6.39 x 2) x 2
	Model Name		-	(DS-GB066FAV* x 1) x 2 + (DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x 1) x 2 + (DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x 1) x 1 + (DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 2
	Oil	Type	-	PVE	PVE	PVE
		Initial charge	cc x n	(1,100 x 1) x 2 + (1,100 x 2) x 2	(1,100 x 1) x 2 + (1,100 x 2) x 2	(1,100 x 1) x 1 + (1,400 x 1) x 1 + (1,100 x 2) x 2
Fan	Type		-	Propeller	Propeller	Propeller
	Discharge direction		-	Top	Top	Top
	Quantity		EA	6	7	7
	Air Flow Rate		m³/min	220 x 2 + 290 x 2	220 x 1 + 255 x 1 + 290 x 2	220 x 1 + 255 x 1 + 290 x 2
			l/s	3,667 x 2 + 4,833 x 2	3,667 x 1 + 4,250 x 1 + 4,833 x 2	3,667 x 1 + 4,250 x 1 + 4,833 x 2
	External Static Pressure	Max.	mmAq	8	8	8
			Pa	78.45	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor	BLDC Motor
	Output		W x n	(830 x 1) x 2 + (620 x 2) x 2	(830 x 1) x 1 + (620 x 2) x 3	(830 x 1) x 1 + (620 x 2) x 3

## 2. Specification

### Standard

Type				DVMS	DVMS	DVMS
Model Name				AM680KXVAGH1ET	AM700KXVAGH1ET	AM720KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM120JXVAGH/ET	AM140KXVAGH/ET	AM160KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			AM220KXVAGH/ET	AM220KXVAGH/ET	AM220KXVAGH/ET
Piping Connections	Liquid Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		22.22 (7/8)	22.22 (7/8)	22.22 (7/8)
	Gas Pipe	Type		Braze connection	Braze connection	Braze connection
		Φ, mm (inch)		53.98 (2-1/8)	53.98 (2-1/8)	53.98 (2-1/8)
	High pressure Gas Pipe(HR Only)	Type		-	-	-
		Φ, mm (inch)		-	-	-
	Heat Insulation			Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90	90
	Total piping length (System)	Max.	m	1,000	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110	110
	Level difference (IDU in highest position)	Max.	m	110	110	110
	Level difference (IDU-IDU)	Max.	m	50	50	50
Wiring connections	Transmission Cable	Min.	mm <sup>2</sup>	0.75	0.75	0.75
		Remark	-	F1, F2	F1, F2	F1, F2
	Power supply intake			Both indoor and outdoor unit	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A	R410A
	Factory Charging	kg		6.5 x 2 + 8.4 x 2	6.5 x 1 + 7.7 x 1 + 8.4 x 2	6.5 x 1 + 8.4 x 3
		tCO <sub>2</sub> e		62.22	64.73	66.19
Sound	Sound Pressure	Cooling	dB(A)	70	70	70
		Heating	dB(A)	72	72	72
	Sound Power		dB(A)	93	93	93
External Dimension	Net Weight		kg	210.0 x 2 + 290.0 x 2	210.0 x 1 + 226.0 x 1 + 290.0 x 2	210.0 x 1 + 253.0 x 1 + 290.0 x 2
	Shipping Weight		kg	217.0 x 2 + 310.0 x 2	217.0 x 1 + 246.0 x 1 + 310.0 x 2	217.0 x 1 + 273.0 x 1 + 310.0 x 2
	Net Dimensions (WxHxD)		mm	(880 x 1,695 x 765) x 2 + (1,295 x 1,695 x 765) x 2	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 3	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 3
	Shipping Dimensions (WxHxD)		mm	(948 x 1,887 x 832) x 2 + (1,363 x 1,887 x 832) x 2	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 3	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 3
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24	-25 ~ 24



#### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
  - (If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)
  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.



## 2. Specification

### Standard

Type				DVM S	DVM S
Model Name				AM740KXVAGH1ET	AM760KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM180KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			AM220KXVAGH/ET	AM220KXVAGH/ET
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50	3, 4, 380-415, 50
Mode			-	HEAT PUMP	HEAT PUMP
Performance	HP		HP	74	76
	Capacity	Cooling (Rated)	kW	207.2	212.8
		Heating (Rated)	kW	200.0	205.6
		Heating (Max)	kW	233.1	239.4
Maximum number of connectable indoor units			EA	64	64
Total capacity of the connected Indoor Units		Min.	kW	103.6	106.4
		Max.	kW	269.4	276.6
Power	Power Input (Ducted)	Cooling (Rated)	kW	58.86	61.45
		Heating (Rated)	kW	43.69	45.08
		Heating (Max)	kW	55.34	57.00
	Power Input (Non-Ducted)	Cooling (Rated)	kW	67.63	71.91
		Heating (Rated)	kW	51.42	52.49
		Heating (Max)	kW	65.13	66.43
	Current Input (Ducted)	Cooling (Rated)	A	94.40	98.50
		Heating (Rated)	A	70.10	72.30
		Heating (Max)	A	88.80	91.50
	Current Input (Non-Ducted)	Cooling (Rated)	A	108.50	115.30
		Heating (Rated)	A	82.50	84.20
		Heating (Max)	A	104.50	106.60
	Current	Minimum Ssc	MVA	31.3	30.6
		MCA	A	153.4	156.2
		MFA	A	175	175
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.52	3.46
	COP (Ducted)	Heating (Rated)	W/W	4.58	4.56
		Heating (Max)	W/W	4.21	4.20
	EER (Non-Ducted)	Cooling (Rated)	W/W	3.06	2.96
	COP (Non-Ducted)	Heating (Rated)	W/W	3.89	3.92
Heating (Max)		W/W	3.58	3.60	
Casing	Material	Body	-	EGI Steel Plate	EGI Steel Plate
		Base	-	EGI Steel Plate	EGI Steel Plate
Heat Exchanger	Type		-	Fin & Tube	Fin & Tube
	Material	Fin	-	Al	Al
		Tube	-	Cu	Cu
	Fin Treatment		-	Anti-corrosion	Anti-corrosion
Compressor	Type		-	Inverter Scroll x 6	Inverter Scroll x 7
	Output		kW x n	(6.39 x 1) x 1 + (7.81 x 1) x 1 + (6.39 x 2) x 2	(6.39 x 1) x 1 + (5.18 x 2) x 1 + (6.39 x 2) x 2
	Model Name		-	(DS-GB066FAV* x 1) x 1 + (DS4GJ5080FV* x 1) x 1 + (DS-GB066FAV* x 2) x 2	(DS-GB066FAV* x 1) x 1 + (DS-GB052FAV* x 2) x 1 + (DS-GB066FAV* x 2) x 2
	Oil	Type	-	PVE	PVE
		Initial charge	cc x n	(1,100 x 1) x 1 + (1,400 x 1) x 1 + (1,100 x 2) x 2	(1,100 x 1) x 1 + (1,100 x 2) x 3
Fan	Type		-	Propeller	Propeller
	Discharge direction		-	Top	Top
	Quantity		EA	7	7
	Air Flow Rate		m³/min	220 x 1 + 290 x 3	220 x 1 + 290 x 3
			l/s	3,667 x 1 + 4,833 x 3	3,667 x 1 + 4,833 x 3
	External Static Pressure	Max.	mmAq	8	8
			Pa	78.45	78.45
Fan Motor	Type		-	BLDC Motor	BLDC Motor
	Output		W x n	(830 x 1) x 1 + (620 x 2) x 3	(830 x 1) x 1 + (620 x 2) x 3

## 2. Specification

### Standard

Type				DVM S	DVM S
Model Name				AM740KXVAGH1ET	AM760KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM120JXVAGH/ET
	Outdoor unit module 2			AM180KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM220KXVAGH/ET
	Outdoor unit module 4			AM220KXVAGH/ET	AM220KXVAGH/ET
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection
			Φ, mm (inch)	22.22 (7/8)	22.22 (7/8)
	Gas Pipe		Type	Braze connection	Braze connection
			Φ, mm (inch)	53.98 (2-1/8)	53.98 (2-1/8)
	High pressure Gas Pipe(HR Only)		Type	-	-
			Φ, mm (inch)	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110
	Level difference (IDU in highest position)	Max.	m	110	110
Wiring connections	Transmission Cable		mm <sup>2</sup>	0.75	0.75
			Remark	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A
	Factory Charging		kg	6.5 x 1 + 8.4 x 3	6.5 x 1 + 8.4 x 3
			tCO <sub>2</sub> e	66.19	66.19
Sound	Sound Pressure	Cooling	dB(A)	70	70
		Heating	dB(A)	72	72
	Sound Power		dB(A)	93	93
External Dimension	Net Weight		kg	210.0 x 1 + 255.0 x 1 + 290.0 x 2	210.0 x 1 + 282.0 x 1 + 290.0 x 2
	Shipping Weight		kg	217.0 x 1 + 275.0 x 1 + 310.0 x 2	217.0 x 1 + 302.0 x 1 + 310.0 x 2
	Net Dimensions (WxHxD)		mm	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 3	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 3
	Shipping Dimensions (WxHxD)		mm	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 3	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 3
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
- 2) Performance of Multiple Module Outdoor unit is weighted average of Single Module outdoor units.
- 3) Allowed combination ratio of the total rated indoor unit capacity over the rated outdoor unit capacity is 50~130%.
- 4) 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
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
 

(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)

  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

## 2. Specification

### Standard

Type				DVM S		DVM S	
Model Name				AM780KXVAGH1ET		AM800KXVAGH1ET	
				AM120JXVAGH/ET		AM200KXVAGH/ET	
				AM220KXVAGH/ET		AM200KXVAGH/ET	
				AM220KXVAGH/ET		AM200KXVAGH/ET	
				AM220KXVAGH/ET		AM200KXVAGH/ET	
Power Supply			Ø, #, V, Hz	3, 4, 380-415, 50		3, 4, 380-415, 50	
Mode			-	HEAT PUMP		HEAT PUMP	
Performance	HP		HP	78		80	
	Capacity	Cooling (Rated)	kW	218.4		224.0	
		Heating (Rated)	kW	207.6		224.0	
		Heating (Max)	kW	245.7		252.0	
Maximum number of connectable indoor units			EA	64		64	
Total capacity of the connected Indoor Units		Min.	kW	109.2		112.0	
		Max.	kW	283.9		291.2	
Power	Power Input (Ducted)	Cooling (Rated)	kW	63.75		64.92	
		Heating (Rated)	kW	45.80		48.68	
		Heating (Max)	kW	59.36		58.32	
	Power Input (Non-Ducted)	Cooling (Rated)	kW	74.94		73.44	
		Heating (Rated)	kW	53.76		55.32	
		Heating (Max)	kW	69.71		66.32	
	Current Input (Ducted)	Cooling (Rated)	A	102.20		104.00	
		Heating (Rated)	A	73.50		78.00	
		Heating (Max)	A	95.30		93.60	
	Current Input (Non-Ducted)	Cooling (Rated)	A	120.20		117.60	
		Heating (Rated)	A	86.20		88.80	
		Heating (Max)	A	111.90		106.40	
	Current	Minimum Ssc	MVA	31.1		32.4	
		MCA	A	158.8		168.0	
		MFA	A	175		200	
Efficiency	EER (Ducted)	Cooling (Rated)	W/W	3.43		3.45	
	COP (Ducted)	Heating (Rated)	W/W	4.53		4.60	
		Heating (Max)	W/W	4.14		4.32	
	EER (Non-Ducted)	Cooling (Rated)	W/W	2.91		3.05	
	COP (Non-Ducted)	Heating (Rated)	W/W	3.86		4.05	
		Heating (Max)	W/W	3.52		3.80	
Casing	Material	Body	-	EGI Steel Plate		EGI Steel Plate	
		Base	-	EGI Steel Plate		EGI Steel Plate	
Heat Exchanger	Type		-	Fin & Tube		Fin & Tube	
	Material	Fin	-	Al		Al	
		Tube	-	Cu		Cu	
	Fin Treatment		-	Anti-corrosion		Anti-corrosion	
Compressor	Type		-	Inverter Scroll x 7		Inverter Scroll x 8	
	Output		kW x n	(6.39 x 1) x 1 + (6.39 x 2) x 3		(5.18 x 2) x 4	
	Model Name		-	(DS-GB066FAV* x 1) x 1 + (DS-GB066FAV* x 2) x 3		(DS-GB052FAV* x 2) x 4	
	Oil	Type	-	PVE		PVE	
		Initial charge	cc x n	(1,100 x 1) x 1 + (1,100 x 2) x 3		(1,100 x 2) x 4	
Fan	Type		-	Propeller		Propeller	
	Discharge direction		-	Top		Top	
	Quantity		EA	7		8	
	Air Flow Rate		m³/min	220 x 1 + 290 x 3		290 x 4	
			l/s	3,667 x 1 + 4,833 x 3		4,833 x 4	
	External Static Pressure	Max.		mmAq	8		8
Fan Motor	Type		-	Pa		78.45	
	Output		W x n	(830 x 1) x 1 + (620 x 2) x 3		(620 x 2) x 4	

## 2. Specification

### Standard

Type				DVM S	DVM S
Model Name				AM780KXVAGH1ET	AM800KXVAGH1ET
	Outdoor unit module 1			AM120JXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 2			AM220KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 3			AM220KXVAGH/ET	AM200KXVAGH/ET
	Outdoor unit module 4			AM220KXVAGH/ET	AM200KXVAGH/ET
Piping Connections	Liquid Pipe		Type	Braze connection	Braze connection
			Φ, mm (inch)	22.22 (7/8)	22.22 (7/8)
	Gas Pipe		Type	Braze connection	Braze connection
			Φ, mm (inch)	53.98 (2-1/8)	53.98 (2-1/8)
	High pressure Gas Pipe(HR Only)		Type	-	-
			Φ, mm (inch)	-	-
	Heat Insulation		-	Both liquid and gas pipes	Both liquid and gas pipes
	Piping length (ODU-IDU)	Max. [Equiv.]	m	200[220]	200[220]
	Piping length (1st Branch-IDU)	Max.	m	90	90
	Total piping length (System)	Max.	m	1,000	1,000
	Level difference (ODU in highest position)	Max.	m	110	110
	Level difference (IDU in highest position)	Max.	m	110	110
Wiring connections	Transmission Cable		mm <sup>2</sup>	0.75	0.75
			Remark	F1, F2	F1, F2
	Power supply intake		-	Both indoor and outdoor unit	Both indoor and outdoor unit
Refrigerant	Type		-	R410A	R410A
	Factory Charging		kg	6.5 x 1 + 8.4 x 3	8.4 x 4
			tCO <sub>2</sub> e	66.19	70.16
Sound	Sound Pressure	Cooling	dB(A)	70	71
		Heating	dB(A)	72	73
	Sound Power		dB(A)	94	93
External Dimension	Net Weight		kg	210.0 x 1 + 290.0 x 3	282.0 x 4
	Shipping Weight		kg	217.0 x 1 + 310.0 x 3	302.0 x 4
	Net Dimensions (WxHxD)		mm	(880 x 1,695 x 765) x 1 + (1,295 x 1,695 x 765) x 3	(1,295 x 1,695 x 765) x 4
	Shipping Dimensions (WxHxD)		mm	(948 x 1,887 x 832) x 1 + (1,363 x 1,887 x 832) x 3	(1,363 x 1,887 x 832) x 4
Operating Temp. Range	Cooling		°C	-5 ~ 48	-5 ~ 48
	Heating		°C	-25 ~ 24	-25 ~ 24



### NOTE

- Specification may be subject to change without prior notice.
- Specification comply with EN14825 and Eurovent test condition
- 1) Performances are based on the following test conditions.
  - Cooling : Indoor temperature 27°CDB, 19°CWB, Outdoor temperature 35°CDB, 24°CWB
  - Heating : Indoor temperature 20°CDB, 15°CWB, Outdoor temperature 7°CDB, 6°CWB
  - Equivalent refrigerant pipe length 5m, Level differences 0m
  - Refer to EUROVENT website([www.eurovent-certification.com](http://www.eurovent-certification.com)) for other indoor unit combination and more detail test conditions.
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  - Sound pressure level may differ depending on operation condition.
  - dBA = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20uPa
- 5) 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
- 6) Sound values of multi combination are theoretical values based on sound results of individual installed units.
- 7) These products contain R410A (GWP=2,088) which is fluorinated greenhouse gas.
- 8) If outdoor unit is located in a higher position than indoor unit, level difference is 110m or under.
 

(If the level difference is higher than 50m, make a decision by PDM kit installation Guide software whether the PDM kit should be installed or not.)

  - PDM kit: Pressure Drop Modulation kit
  - When the outdoor unit is below the indoor unit & the level differences are 40m or more, contact your local dealer for more information.
- In case you want to know more information regarding capacity and correction, please refer to capacity table TDB on [pvi.samsung.com](http://pvi.samsung.com) site.

# 3. Electric Characteristics

## Standard

Capacity		Model	Power Supply		Voltage Range		Running Current [A] (Ducted)		Running Current [A] (Non-Ducted)		Current [A]		ODU Fan Motor	
HP	kW		Hz	Voltage	Min. (-10%)	Max. (+10%)	Cooling	Heating	Cooling	Heating	MCA	MFA	kW	FLA [A]
8	22.4	AM080JXVAGH/ET	50	380-415	342	456	8.0	8.7	9.8	10.5	18.0	25	0.83	2.4
10	28.0	AM100JXVAGH/ET	50	380-415	342	456	11.0	11.4	15.3	14.4	21.1	32	0.83	2.4
12	33.6	AM120JXVAGH/ET	50	380-415	342	456	13.1	13.7	17.3	16.2	25.0	32	0.83	2.4
14	39.2	AM140KXVAGH/ET	50	380-415	342	456	17.5	17.4	22.0	20.3	25.0	32	1.24	3.8
16	44.8	AM160KXVAGH/ET	50	380-415	342	456	18.7	19.4	22.5	24.5	32.0	40	1.24	3.8
18	50.4	AM180KXVAGH/ET	50	380-415	342	456	21.9	20.7	22.6	24.5	39.2	50	1.24	3.8
20	56.0	AM200KXVAGH/ET	50	380-415	342	456	26.0	23.4	29.4	26.6	42.0	63	1.24	3.8
22	61.6	AM220KXVAGH/ET	50	380-415	342	456	29.7	27.2	34.3	31.9	44.6	63	1.24	3.8
24	67.2	AM240KXVAGH/ET	50	380-415	342	456	33.7	28.6	32.2	32.3	55.0	63	1.24	3.8
26	72.8	AM260KXVAGH/ET	50	380-415	342	456	36.0	31.7	37.3	36.7	60.0	75	1.24	3.8
28	78.4	AM280KXVAGH1ET	50	380-415	342	456	31.8	33.1	39.8	40.7	57.0	75	2.07	6.2
30	84.0	AM300KXVAGH1ET	50	380-415	342	456	35.0	34.4	39.9	40.7	64.2	75	2.07	6.2
32	89.6	AM320KXVAGH1ET	50	380-415	342	456	39.1	37.1	46.7	42.8	67.0	75	2.07	6.2
34	95.2	AM340KXVAGH1ET	50	380-415	342	456	42.8	40.9	51.6	48.1	69.6	80	2.07	6.2
36	100.8	AM360KXVAGH1ET	50	380-415	342	456	47.2	44.6	56.3	52.2	69.6	80	2.48	7.6
38	106.4	AM380KXVAGH1ET	50	380-415	342	456	48.4	46.6	56.8	56.4	76.6	90	2.48	7.6
40	112.0	AM400KXVAGH1ET	50	380-415	342	456	51.6	47.9	56.9	56.4	83.8	100	2.48	7.6
42	117.6	AM420KXVAGH1ET	50	380-415	342	456	55.7	50.6	63.7	58.5	86.6	100	2.48	7.6
44	123.2	AM440KXVAGH1ET	50	380-415	342	456	59.4	54.4	68.6	63.8	89.2	100	2.48	7.6
46	128.8	AM460KXVAGH1ET	50	380-415	342	456	55.9	54.6	68.9	64.3	94.6	125	2.9	8.6
48	134.4	AM480KXVAGH1ET	50	380-415	342	456	60.3	58.3	73.6	68.4	94.6	125	3.31	10.0
50	140.0	AM500KXVAGH1ET	50	380-415	342	456	61.5	60.3	74.1	72.6	101.6	125	3.31	10.0
52	145.6	AM520KXVAGH1ET	50	380-415	342	456	64.7	61.6	74.2	72.6	108.8	125	3.31	10.0
54	151.2	AM540KXVAGH1ET	50	380-415	342	456	68.8	64.3	81.0	74.7	111.6	125	3.31	10.0
56	156.8	AM560KXVAGH1ET	50	380-415	342	456	72.5	68.1	85.9	80.0	114.2	150	3.31	10.0
58	162.4	AM580KXVAGH1ET	50	380-415	342	456	76.9	71.8	90.6	84.1	114.2	150	3.72	11.4
60	168.0	AM600KXVAGH1ET	50	380-415	342	456	78.1	73.8	91.1	88.3	121.2	150	3.72	11.4
62	173.6	AM620KXVAGH1ET	50	380-415	342	456	81.3	75.1	91.2	88.3	128.4	150	3.72	11.4
64	179.2	AM640KXVAGH1ET	50	380-415	342	456	85.4	77.8	98.0	90.4	131.2	150	3.72	11.4
66	184.8	AM660KXVAGH1ET	50	380-415	342	456	89.1	81.6	102.9	95.7	133.8	150	3.72	11.4
68	190.4	AM680KXVAGH1ET	50	380-415	342	456	85.6	81.8	103.2	96.2	139.2	175	4.14	12.4
70	196.0	AM700KXVAGH1ET	50	380-415	342	456	90.0	85.5	107.9	100.3	139.2	175	4.55	13.8
72	201.6	AM720KXVAGH1ET	50	380-415	342	456	91.2	87.5	108.4	104.5	146.2	175	4.55	13.8
74	207.2	AM740KXVAGH1ET	50	380-415	342	456	94.4	88.8	108.5	104.5	153.4	175	4.55	13.8
76	212.8	AM760KXVAGH1ET	50	380-415	342	456	98.5	91.5	115.3	106.6	156.2	175	4.55	13.8
78	218.4	AM780KXVAGH1ET	50	380-415	342	456	102.2	95.3	120.2	111.9	158.8	175	4.55	13.8
80	224.0	AM800KXVAGH1ET	50	380-415	342	456	104.0	93.6	117.6	106.4	168.0	200	4.96	15.2

### NOTE

- MCA : Minimum circuit amperes
- MFA : Maximum fuse amperes
- FLA : Full load amperes

# 7. Sound Data

## Summary

## Standard

Capacity		Model	Sound Pressure dB(A)		Sound Power dB(A)
HP	kW		Cooling	Heating	
8	22.4	AM080JXVAGH/ET	57	59	77
10	28	AM100JXVAGH/ET	58	60	79
12	33.6	AM120JXVAGH/ET	62	64	81
14	39.2	AM140KXVAGH/ET	61	63	81
16	44.8	AM160KXVAGH/ET	63	67	83
18	50.4	AM180KXVAGH/ET	64	67	84
20	56	AM200KXVAGH/ET	65	67	87
22	61.6	AM220KXVAGH/ET	65	67	89
24	67.2	AM240KXVAGH/ET	66	69	90
26	72.8	AM260KXVAGH/ET	66	69	90
28	78.4	AM280KXVAGH1ET	66	69	85
30	84	AM300KXVAGH1ET	66	69	86
32	89.6	AM320KXVAGH1ET	67	69	88
34	95.2	AM340KXVAGH1ET	67	69	90
36	100.8	AM360KXVAGH1ET	66	68	90
38	106.4	AM380KXVAGH1ET	67	70	90
40	112	AM400KXVAGH1ET	68	70	90
42	117.6	AM420KXVAGH1ET	68	70	91
44	123.2	AM440KXVAGH1ET	68	70	92
46	128.8	AM460KXVAGH1ET	68	70	90
48	134.4	AM480KXVAGH1ET	68	70	90
50	140	AM500KXVAGH1ET	68	71	90
52	145.6	AM520KXVAGH1ET	69	71	91
54	151.2	AM540KXVAGH1ET	69	71	92
56	156.8	AM560KXVAGH1ET	69	71	92
58	162.4	AM580KXVAGH1ET	69	71	92
60	168	AM600KXVAGH1ET	69	72	93
62	173.6	AM620KXVAGH1ET	69	72	93
64	179.2	AM640KXVAGH1ET	70	72	93
66	184.8	AM660KXVAGH1ET	70	72	94
68	190.4	AM680KXVAGH1ET	70	72	93
70	196	AM700KXVAGH1ET	70	72	93
72	201.6	AM720KXVAGH1ET	70	72	93
74	207.2	AM740KXVAGH1ET	70	72	93
76	212.8	AM760KXVAGH1ET	70	72	93
78	218.4	AM780KXVAGH1ET	70	72	94
80	224	AM800KXVAGH1ET	71	73	93

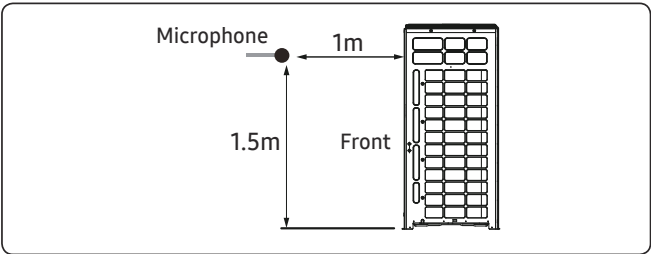
### NOTE

- Sound Pressure Level
  - 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
- Sound Power Level
  - 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.

# 7. Sound Data

## Sound Pressure level

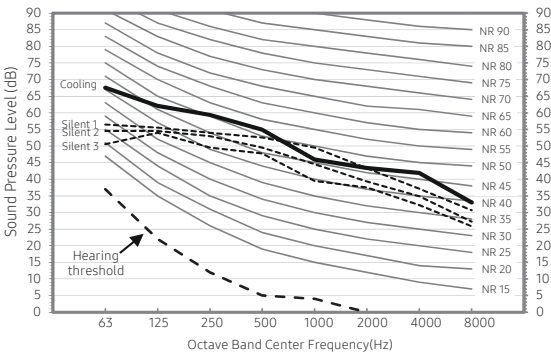
Unit: dB(A)



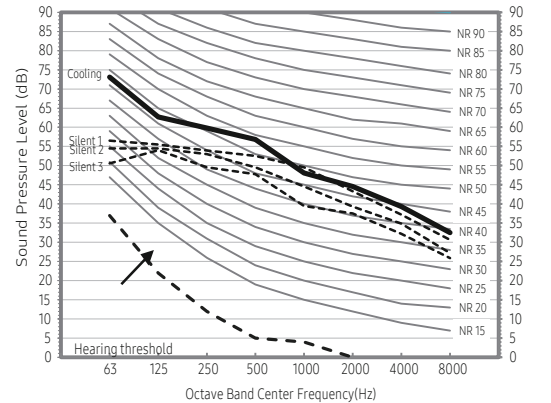
Model	Cooling	Silent 1	Silent 2	Silent 3
AM080JXVHGH/ET	57	54	52	49
AM100JXVHGH/ET	58	55	52	49
AM120JXVHGH/ET	62	55	52	49
AM140JXVHGH/ET	61	57	55	49

- NR Curve

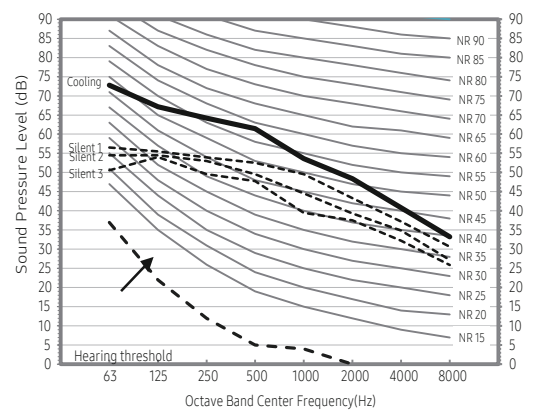
1) AM080JXVHGH/ET



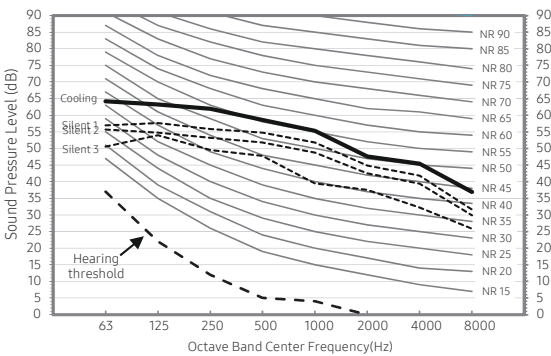
2) AM100JXVHGH/ET



3) AM120JXVHGH/ET



4) AM140JXVHGH/ET



### NOTE

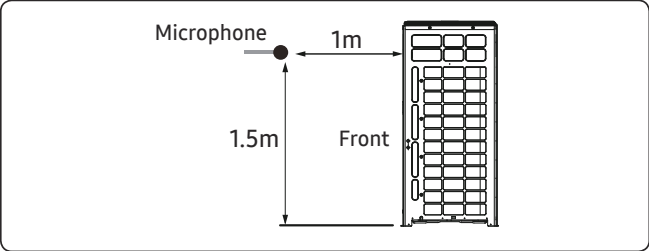
- Specifications may be subject to change without prior notice.
  - Sound pressure level is obtained in an anechoic room.
  - Sound pressure level is a relative value, depending on the distance and acoustic environment.
  - Sound pressure level may differ depending on operation condition.
  - dB(A) =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



# 7. Sound Data

## Sound Pressure level

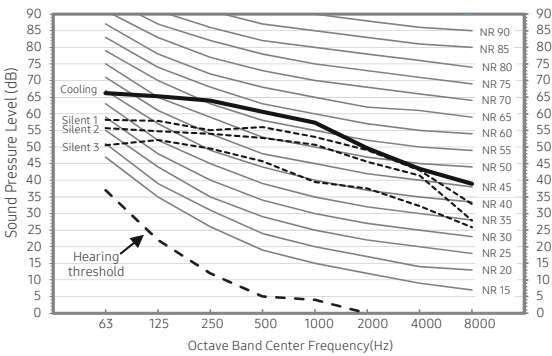
Unit: dB(A)



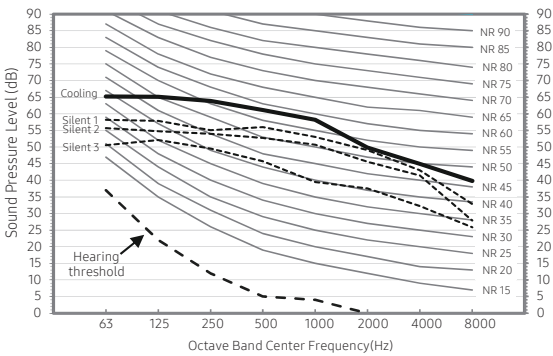
Model	Cooling	Silent 1	Silent 2	Silent 3
AM160JXVHGH/ET	62	59	56	49
AM180JXVHGH/ET	63	59	56	49
AM200JXVHGH/ET	64	59	56	49
AM220JXVHGH/ET	65	59	56	49

• NR Curve

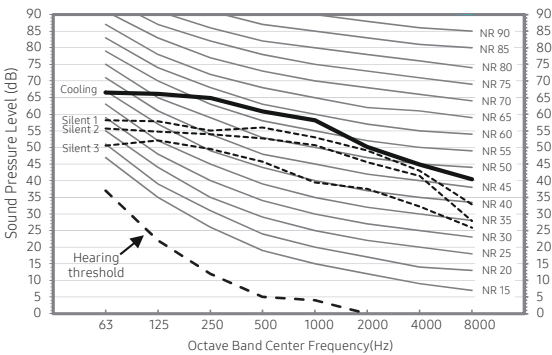
1) AM160JXVHGH/ET



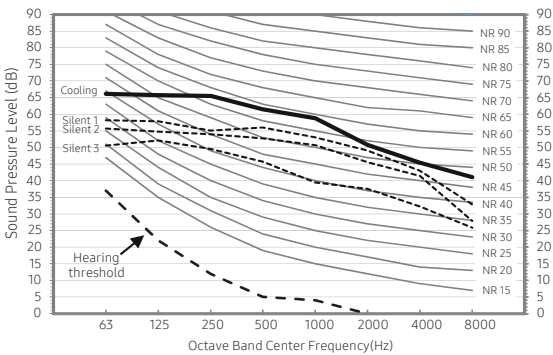
2) AM180JXVHGH/ET



3) AM200JXVHGH/ET



4) AM220JXVHGH/ET



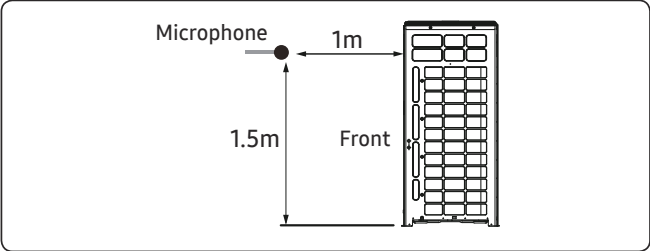
**NOTE**

- 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

## Sound Pressure level

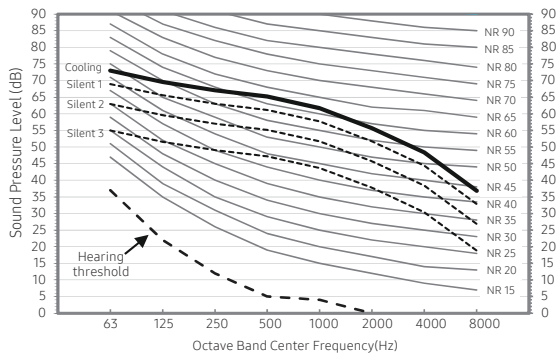
Unit: dB(A)



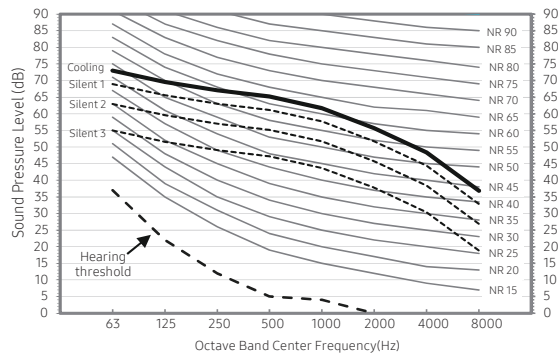
Model	Cooling	Silent 1	Silent 2	Silent 3
AM240KXVGGH/ET	69	63	57	49
AM260KXVGGH/ET	69	63	57	49

• NR Curve

1) AM240KXVGGH/ET



2) AM260KXVGGH/ET



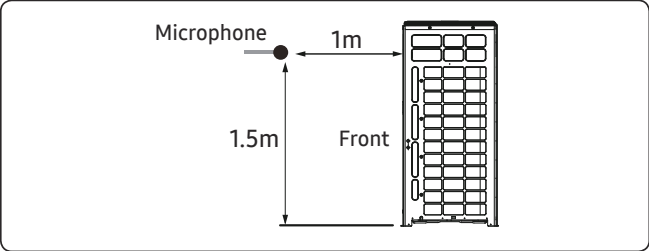
**NOTE**

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  - 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

## Sound Pressure level

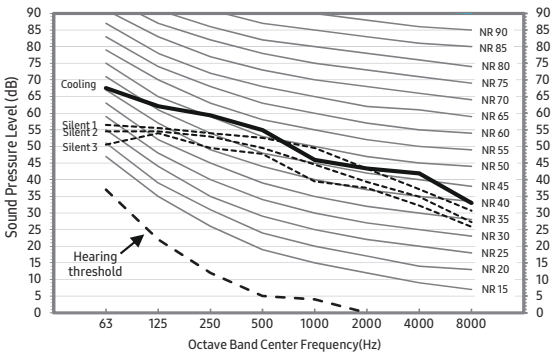
Unit: dB(A)



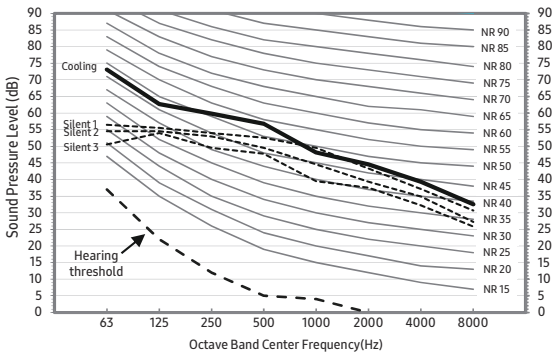
Model	Cooling	Silent 1	Silent 2	Silent 3
AM080JXVAGH/ET	57	54	52	49
AM100JXVAGH/ET	58	55	52	49
AM120JXVAGH/ET	62	55	52	49
AM140KXVAGH/ET	61	57	55	49

• NR Curve

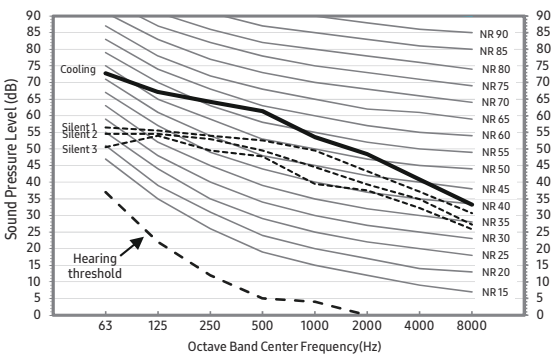
1) AM080JXVAGH/ET



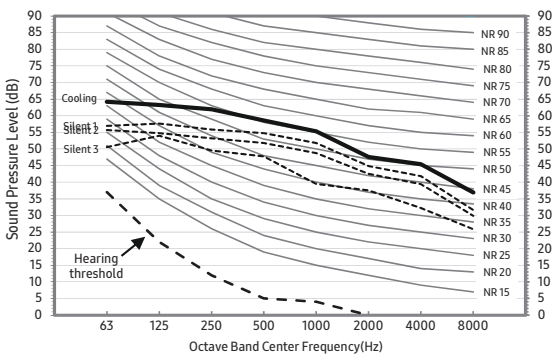
2) AM100JXVAGH/ET



3) AM120JXVAGH/ET



4) AM140KXVAGH/ET



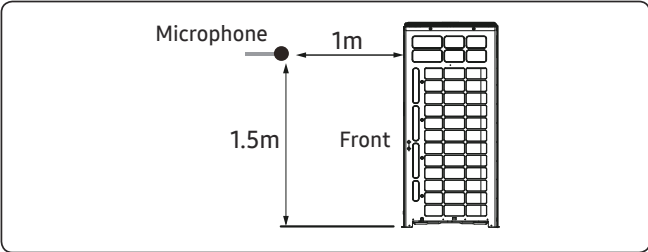
**NOTE**

- 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.
  - dB(A) = A-weighted sound pressure level
  - Reference acoustic pressure 0 dB = 20μPa

# 7. Sound Data

## Sound Pressure level

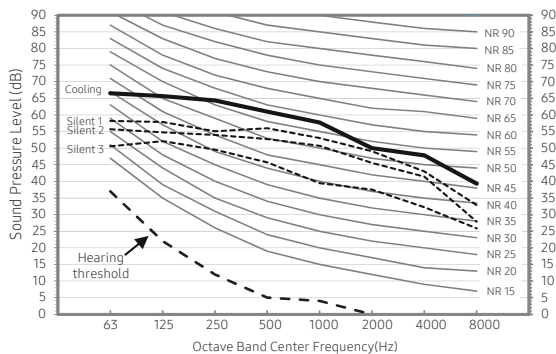
Unit: dB(A)



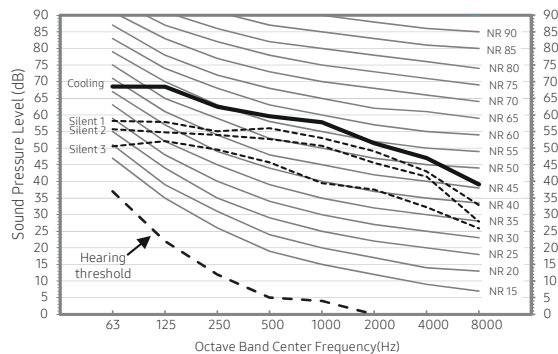
Model	Cooling	Silent 1	Silent 2	Silent 3
AM160KXVAGH/ET	63	59	56	49
AM180KXVAGH/ET	64	59	56	49
AM200KXVAGH/ET	65	59	56	49
AM220KXVAGH/ET	65	59	56	49

• NR Curve

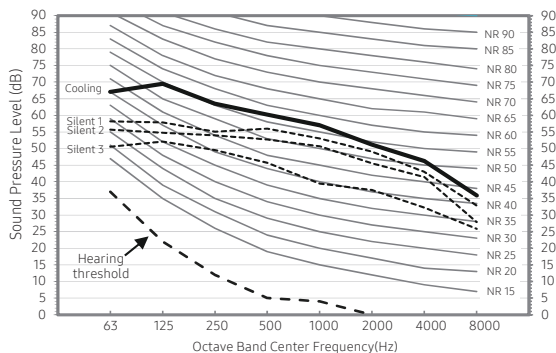
1) AM160KXVAGH/ET



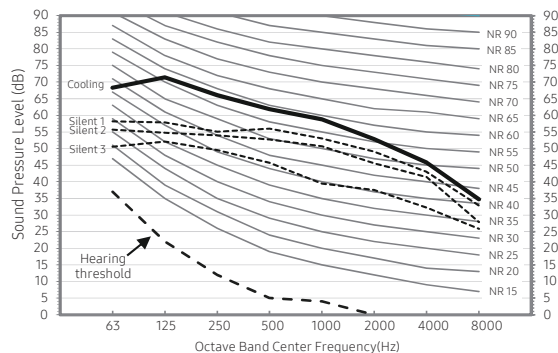
2) AM180KXVAGH/ET



3) AM200KXVAGH/ET



4) AM220KXVAGH/ET



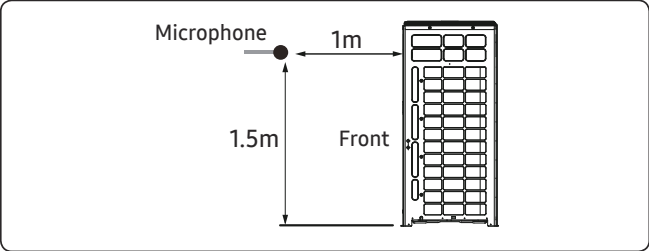
NOTE

- 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

## Sound Pressure level

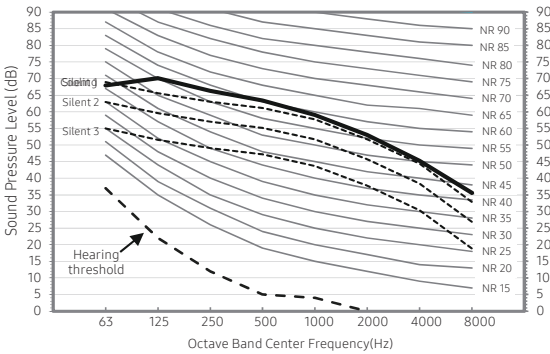
Unit: dB(A)



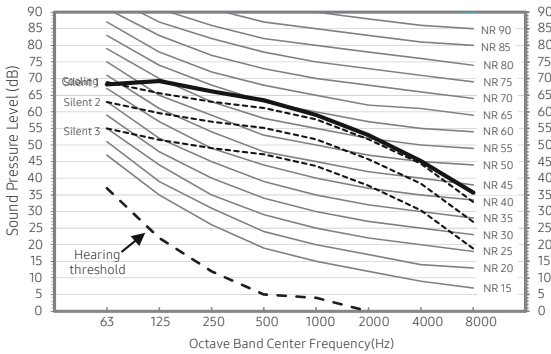
Model	Cooling	Silent1	Silent 2	Silent 3
AM240KXVAGH/ET	66	63	57	49
AM260KXVAGH/ET	66	63	57	49

• NR Curve

1) AM240KXVAGH/ET



2) AM260KXVAGH/ET



**NOTE**

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  - 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

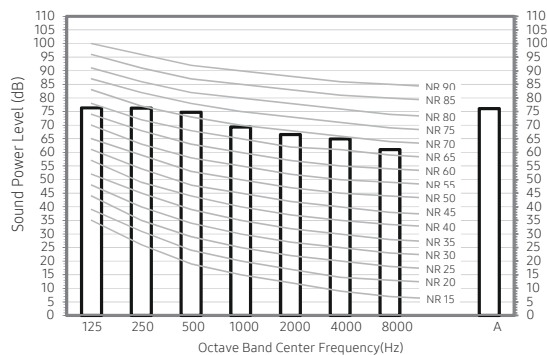
# 7. Sound Data

## Sound Power level

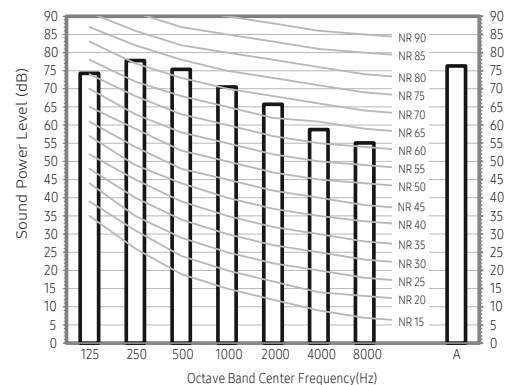
Unit: dB(A)

Model	Power
AM080JXVHGH/ET	77
AM100JXVHGH/ET	78
AM120JXVHGH/ET	83
AM140JXVHGH/ET	81

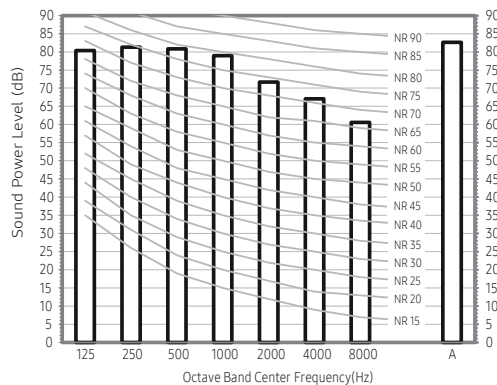
1) AM080JXVHGH/ET



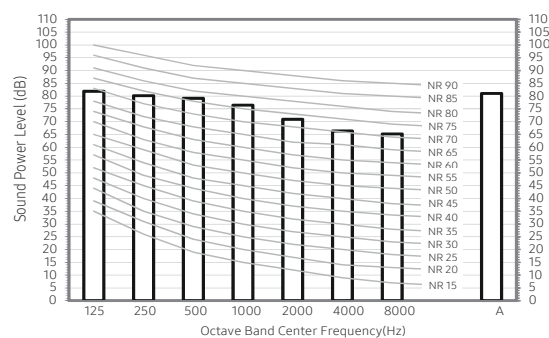
2) AM100JXVHGH/ET



3) AM120JXVHGH/ET



4) AM140JXVHGH/ET



### 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.

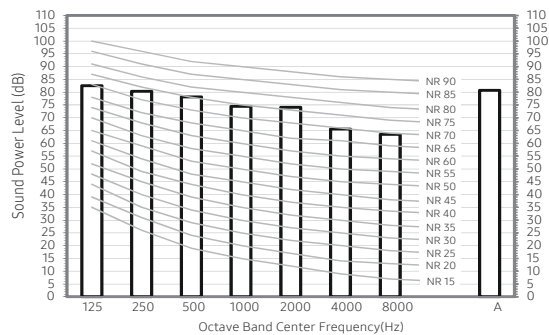
# 7. Sound Data

## Sound Power level

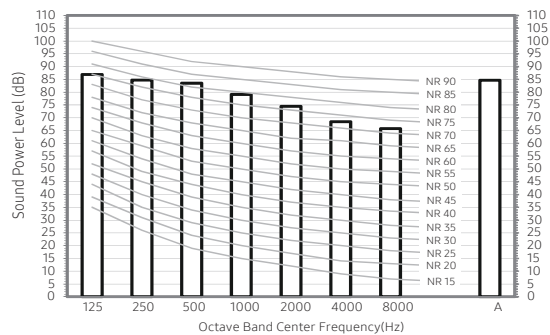
Unit: dB(A)

Model	Power
AM160JXVHGH/ET	82
AM180JXVHGH/ET	85
AM200JXVHGH/ET	86
AM220JXVHGH/ET	88

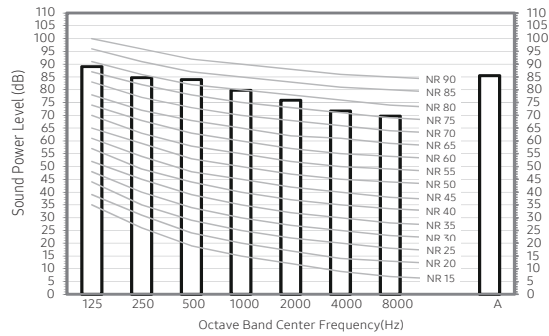
1) AM160JXVHGH/ET



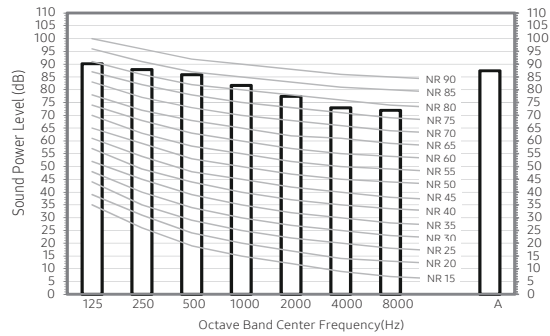
2) AM180JXVHGH/ET



3) AM200JXVHGH/ET



4) AM220JXVHGH/ET



### 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.



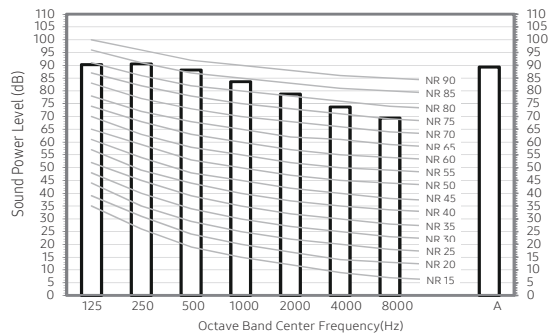
# 7. Sound Data

## Sound Power level

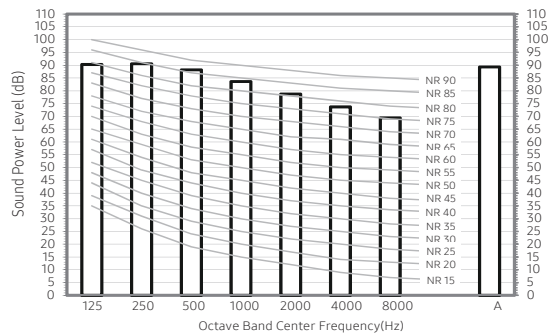
Unit: dB(A)

Model	Power
AM240KXVGGH/ET	90
AM260KXVGGH/ET	90

1) AM240KXVGGH/ET



2) AM260KXVGGH/ET



### 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.

# 7. Sound Data

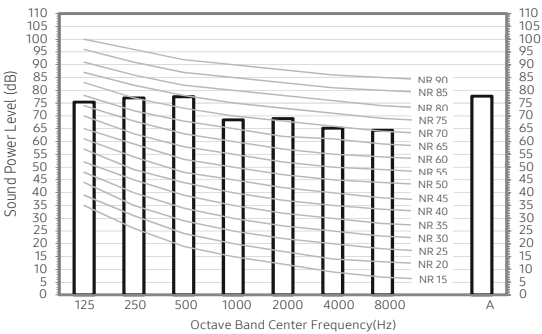
## Sound Power level

Unit: dB(A)

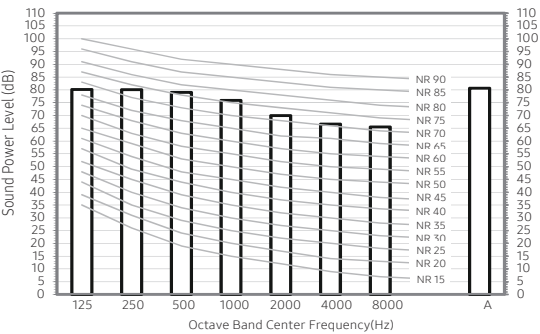
Model	Power
AM080JXVAGH/ET	77
AM100JXVAGH/ET	79
AM120JXVAGH/ET	81
AM140KXVAGH/ET	81

1) AM080JXVAGH/ET

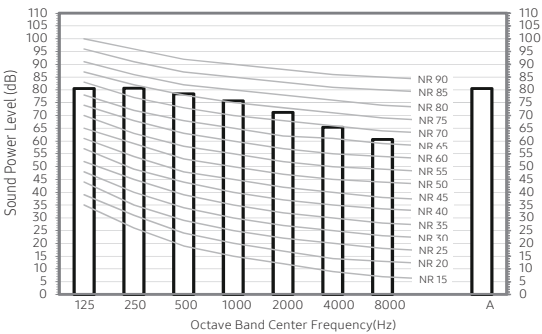
2) AM100JXVAGH/ET



3) AM120JXVAGH/ET



4) AM140KXVAGH/ET



### 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.

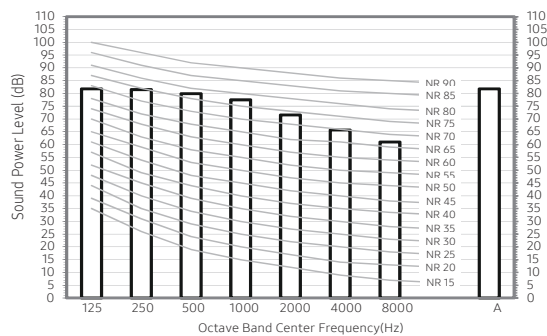
# 7. Sound Data

## Sound Power level

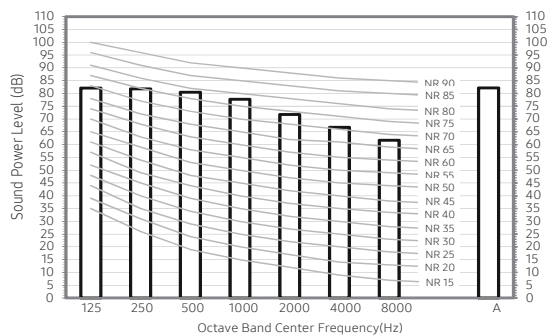
Unit: dB(A)

Model	Power
AM160KXVAGH/ET	83
AM180KXVAGH/ET	84
AM200KXVAGH/ET	87
AM220KXVAGH/ET	89

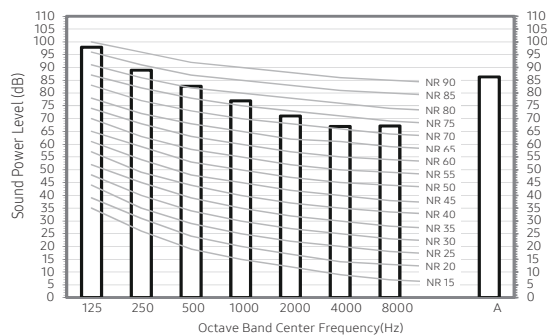
1) AM160KXVAGH/ET



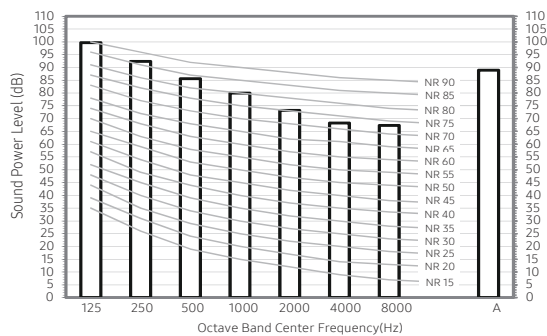
2) AM180KXVAGH/ET



3) AM200KXVAGH/ET



4) AM220KXVAGH/ET



### NOTE

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

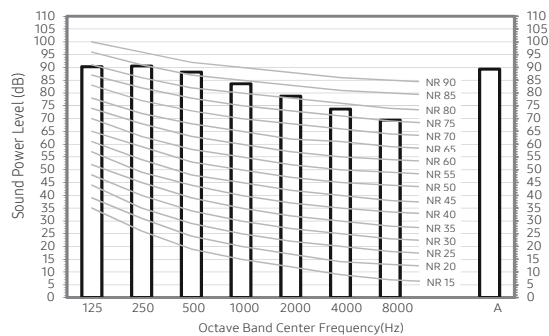
# 7. Sound Data

## Sound Power level

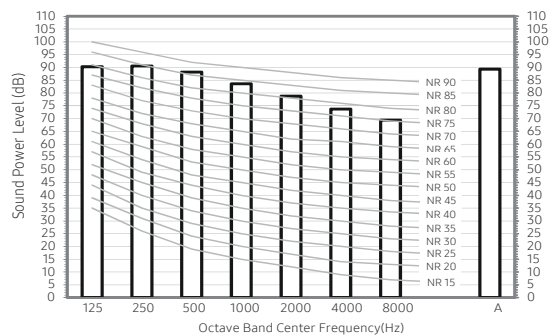
Unit: dB(A)

Model	Power
AM240KXVAGH/ET	90
AM260KXVAGH/ET	90

1) AM240KXVAGH/ET



2) AM260KXVAGH/ET

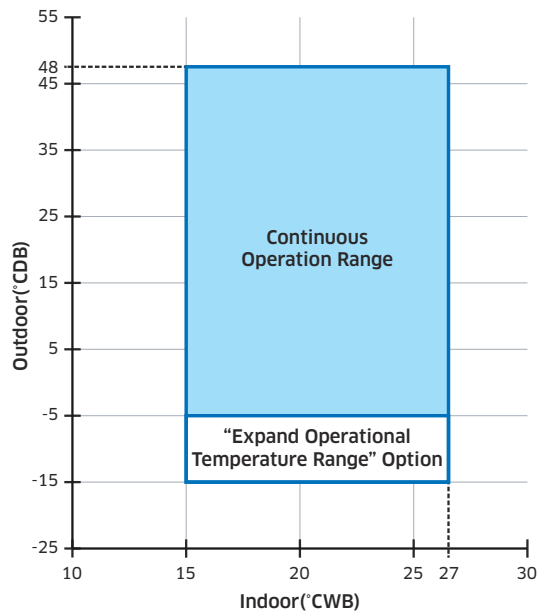


### NOTE

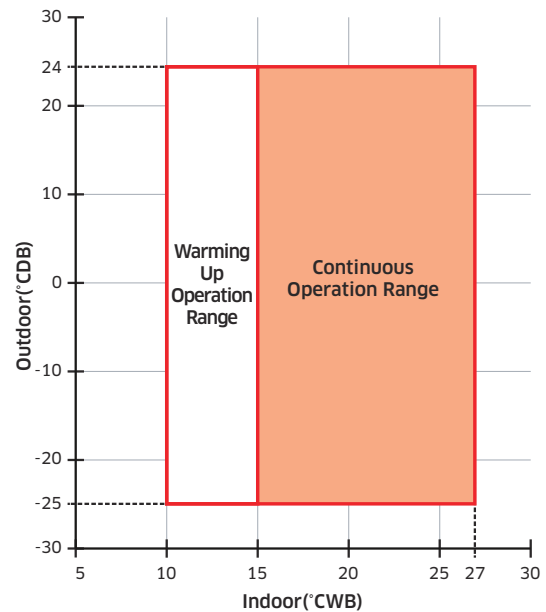
- Specifications may be subject to change without prior notice.
- Sound power level is an absolute value that a sound source generates.
- dBA = A-weighted sound power level.
- Reference power : 1pW.
- Measured according to ISO 3741.

## 8. Operation Range

### Cooling



### Heating



- (1) The operating range is shown in these figures
- (2) The assumed installation conditions are as follows
  - Outdoor units and indoor units combination
  - The Pipe length(including elbow) is 5m
  - The Level difference is 0m
- (3) In the low temperature expansion option application, the cooling operating is possible under expand operational range only for HR system
- (4) In case of heating mode, operating is possible under warming up operation range. However continuous operating is impossible due to a protection control

## 8. Operation Range

### Defrosting correction factor

The heating capacity tables do not take account of the reduction in capacity, when frost has accumulated or while the defrosting operation is in progress.

The capacity values, which take these factors into account, in other words, the integrated heating capacity values, can be calculated as follows :

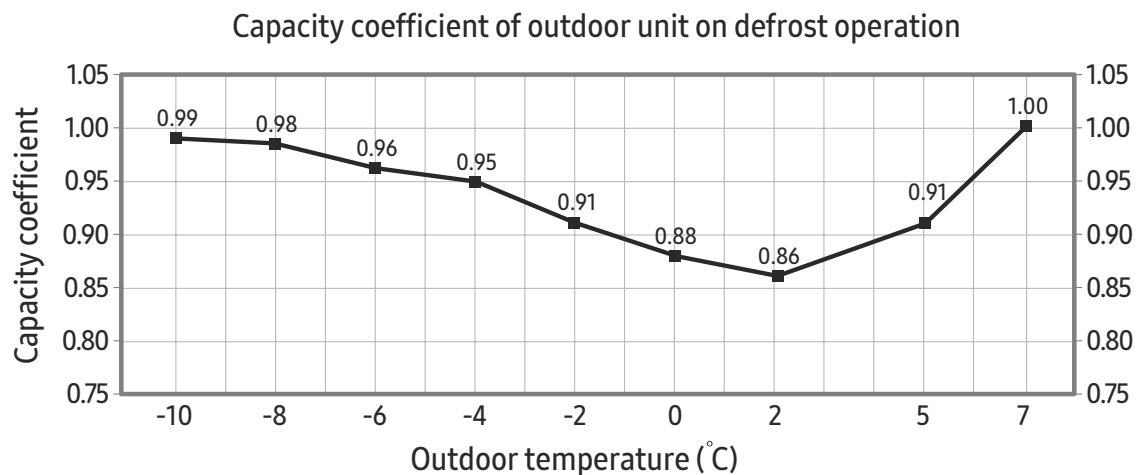
Formula :  $A = B \times C$

Integrated heating capacity = A

Value given in table of capacity characteristics = B

Integrating correction factor for frost accumulation (kW) = C

Outdoor temperature (°C, DB/WB)	-10/-10.4	-8/-8.5	-6/-6.5	-4/-4.6	-2/-2.7	0/-0.7	2/1.2	5/4.1	7/6
Capacity coefficient	0.99	0.98	0.96	0.95	0.91	0.88	0.86	0.91	1.00



On heating operation, frost can be formed on heat exchanger according to outdoor temperature.

(Frost on heat exchanger results in decreasing the performance.)

To remove frost on heat exchanger of outdoor unit, defrost operation is carried out periodically.

During defrost operation, capacity of outdoor unit may decrease.

The decrement is not considered to the individual capacity tables.

This figure shows an effect of intelligence defrost operation

It is actually the frost occurrence section from 0 °C or less.

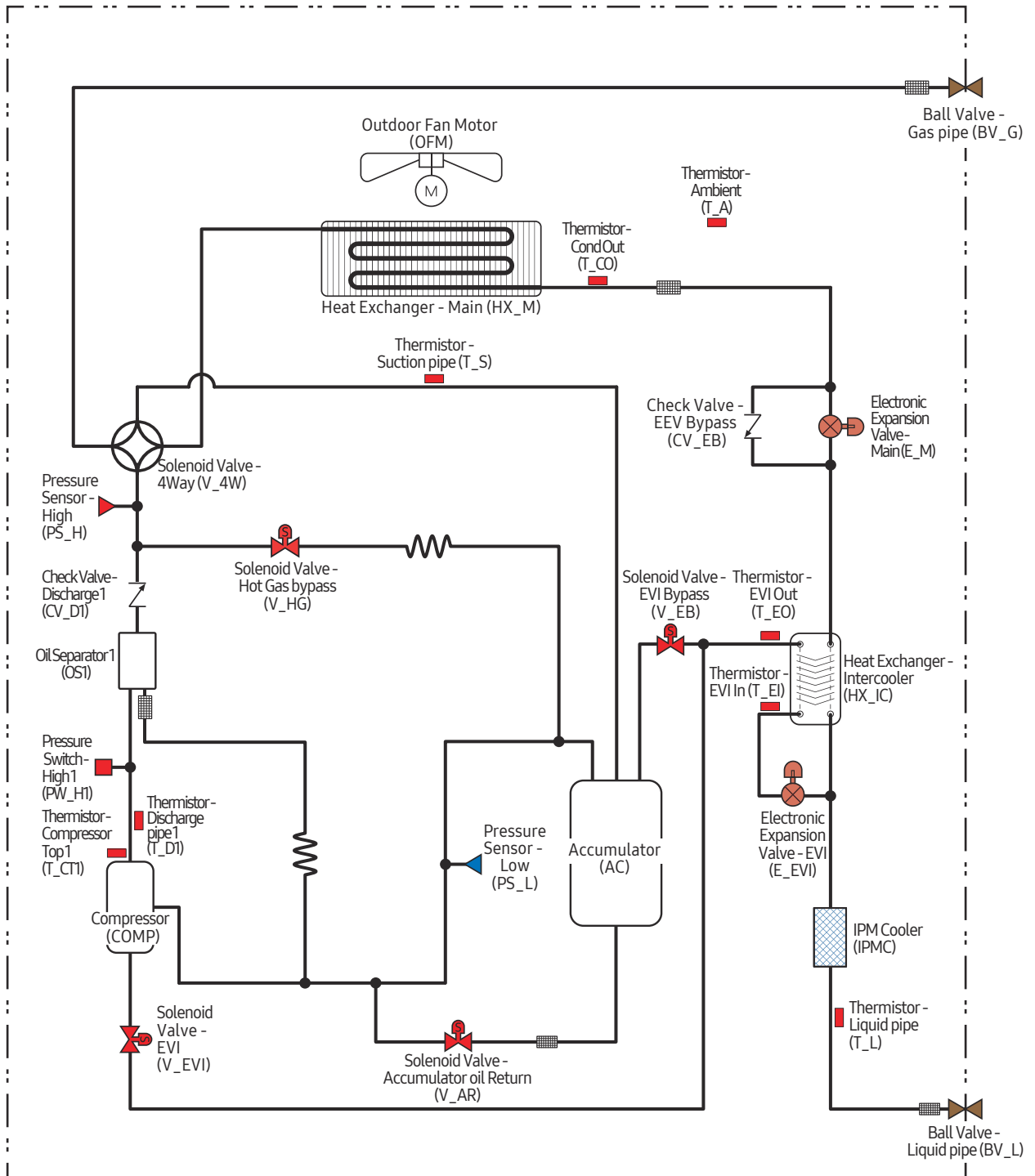
Since the outdoor temperature over 0 °C, the heating performance is the same before and after applying intelligence defrost operation

In outdoor conditions below 0 °C, frost conditions reflect the actual entering the defrost operation because heating performance is improved

## 9. Piping Diagram

### Outdoor unit

(1) AM080~120JXVHGH, AM080~120JXVAGH

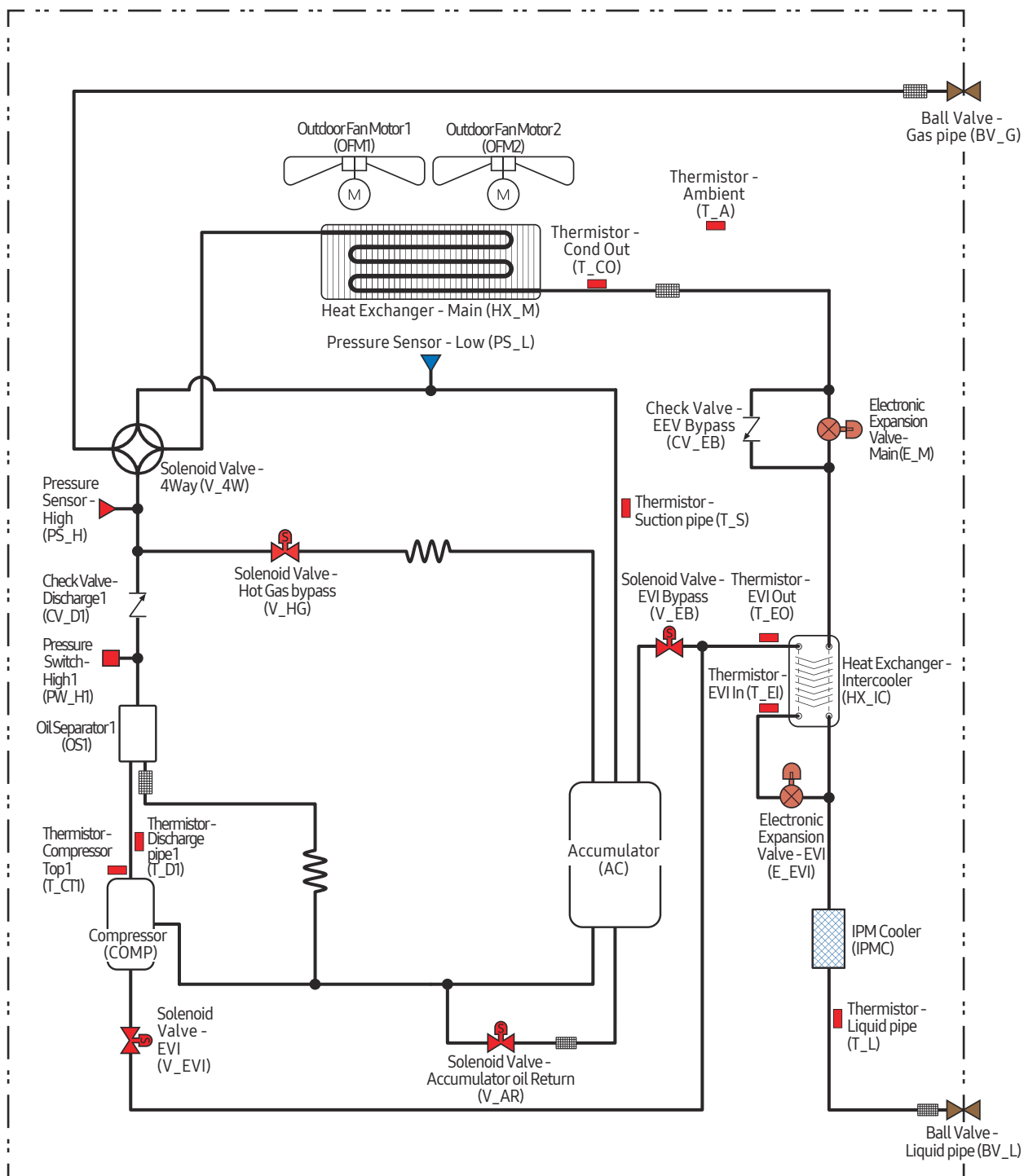




## 9. Piping Diagram

### Outdoor unit

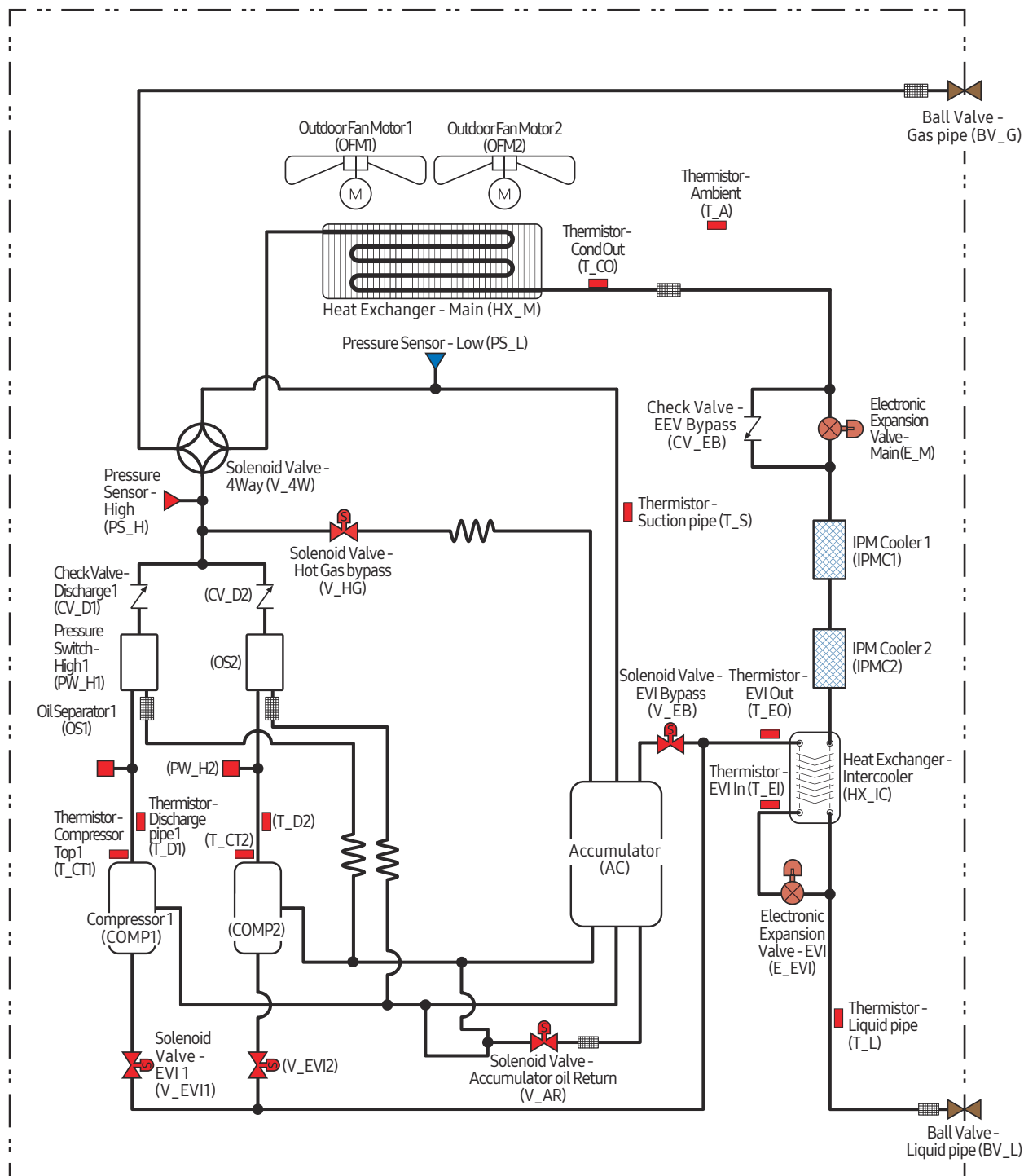
(5) AM140~180KXVAGH



## 9. Piping Diagram

### Outdoor unit

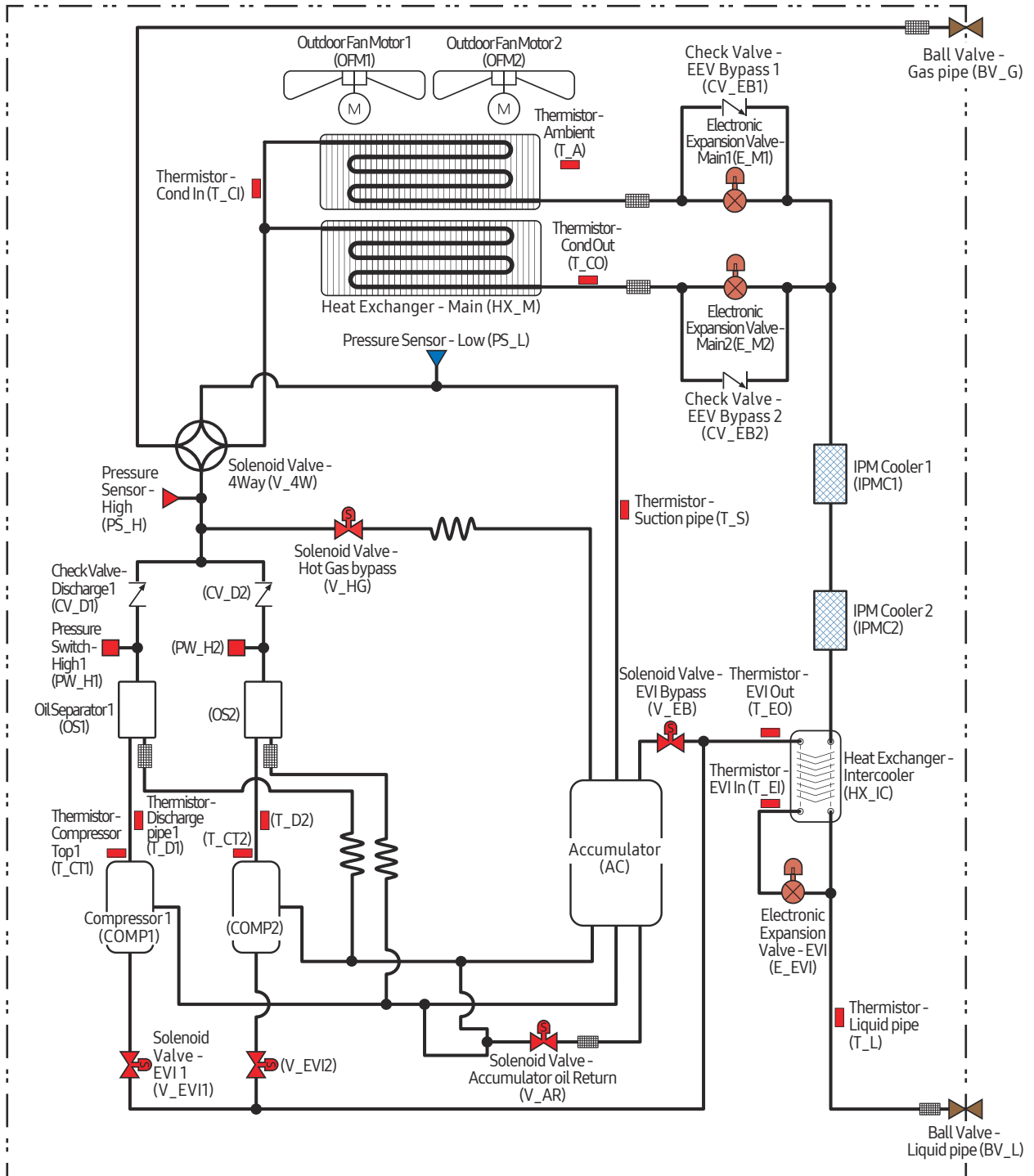
(6) AM200~220KXVAGH



## 9. Piping Diagram

### Outdoor unit

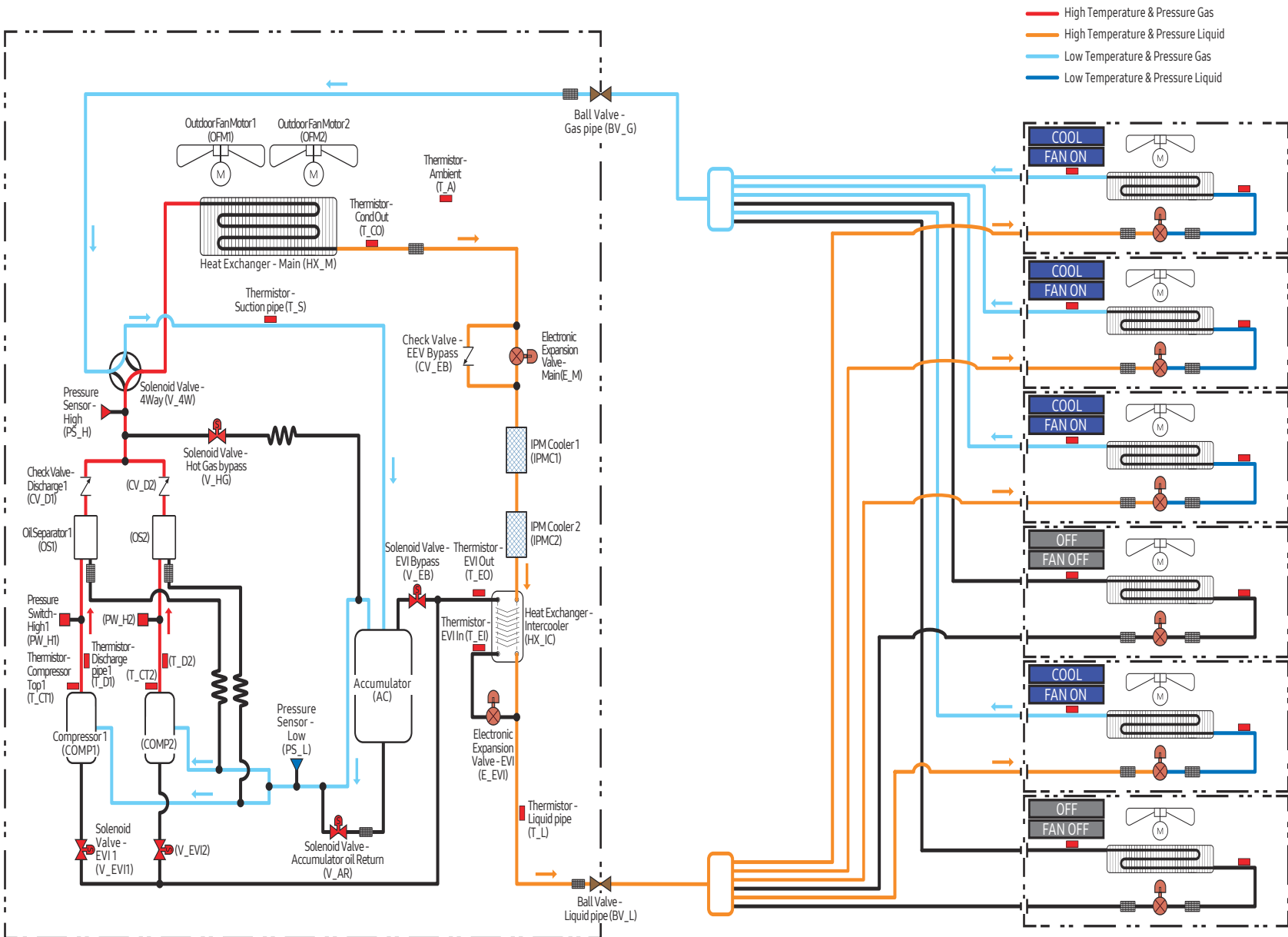
(7) AM240~260KXVAGH



# 9. Piping Diagram

## Cooling System

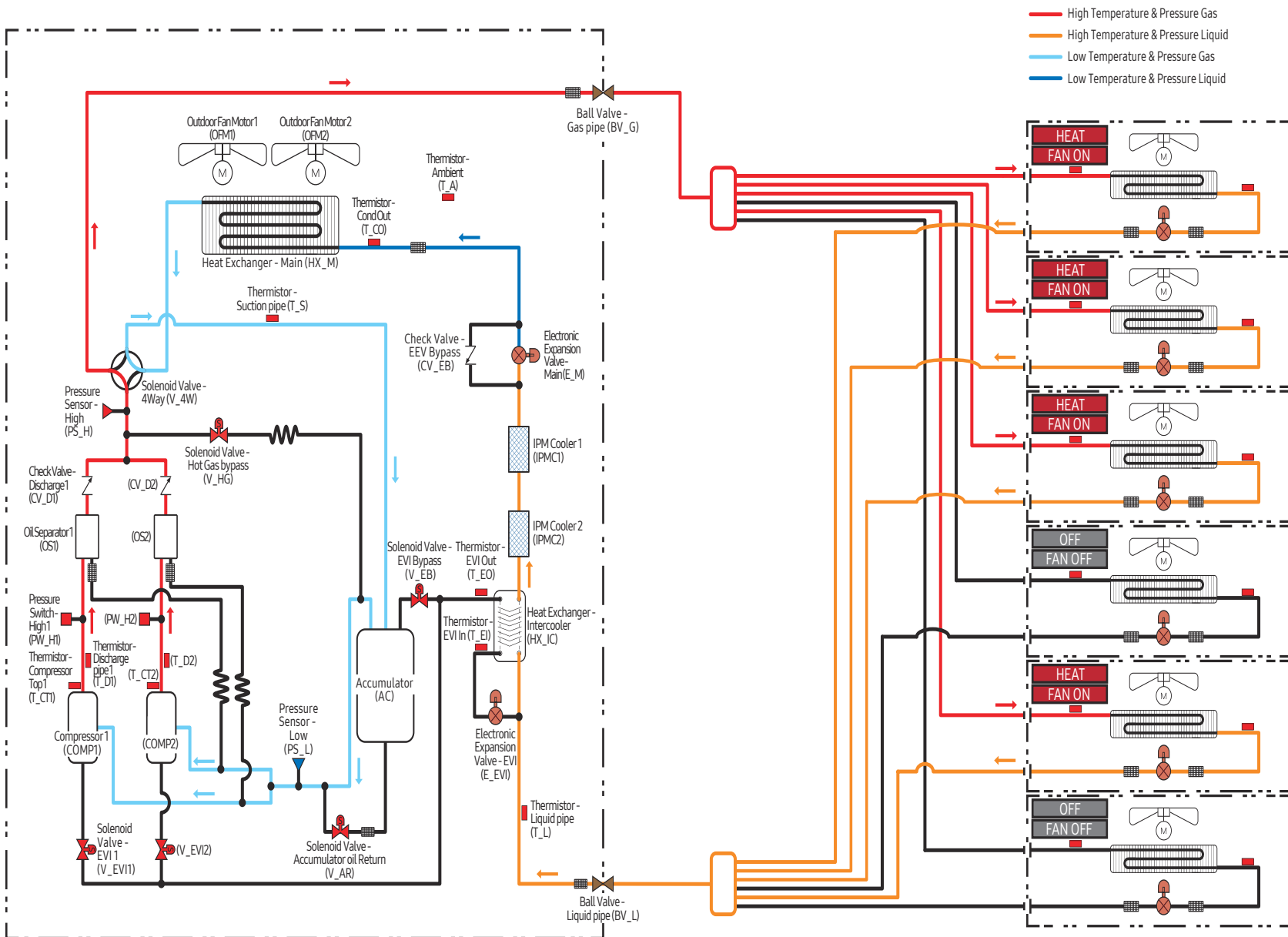
- 20HP with indoor units



# 9. Piping Diagram

## Heating System

- 20HP with indoor units

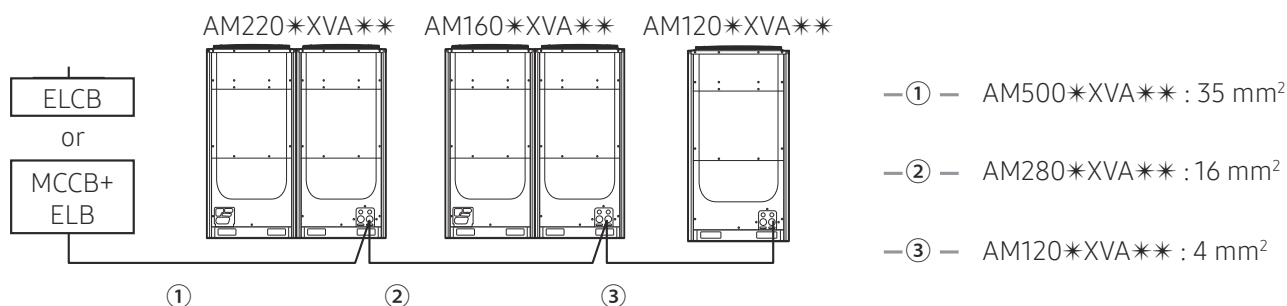


# 10. Installation

## Electrical wiring work

- When installing outdoor units in module, select the power supply cable according to the sum of outdoor unit capacity. (Refer to the table for each model)
- Power Supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 66 / CENELEC: H07RN-F)

Ex.) AM500\*XVA\*\*



### NOTE

- This device is intended for the connection to a power supply system with a maximum permissible system impedance shown in the table (on the left page) at the interface point (power service box) of the user's supply.
- The user must ensure that this device is connected only to a power supply system which fulfills the requirement above. If necessary, the user can ask the public power supply company for the system impedance at the interface point.
- This equipment complies with IEC 61000-3-12 provided that the short-circuit power  $S_{sc}$  is greater than or equal to  $S_{sc}(*2)$  at the interface point between the user's supply and the public system. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power  $S_{sc}$  greater than or equal to  $S_{sc}(*2)$ .

[ $S_{sc}(*2)$ ]

Model	$S_{sc}$ [MVA]
AM080JXVHGH/ET	3.1
AM100JXVHGH/ET	4.5
AM120JXVHGH/ET	5.3
AM140JXVHGH/ET	5.3
AM160JXVHGH/ET	6.6
AM180JXVHGH/ET	7.6
AM200JXVHGH/ET	8.0
AM220JXVHGH/ET	8.6
AM240KXVGGH/ET	12.5
AM260KXVGGH/ET	12.2
AM080JXVHGR/ET	3.1
AM100JXVHGR/ET	4.5
AM120JXVHGR/ET	5.3
AM140JXVHGR/ET	5.3
AM160JXVHGR/ET	6.6
AM180JXVHGR/ET	7.6
AM200JXVHGR/ET	8.0
AM220JXVHGR/ET	8.6
AM240MXVGNR/ET	12.5
AM260MXVGNR/ET	12.2

Model	$S_{sc}$ [MVA]
AM080JXVAGH/ET	3.1
AM100JXVAGH/ET	4.5
AM120JXVAGH/ET	5.3
AM140KXVAGH/ET	5.4
AM160KXVAGH/ET	7.2
AM180KXVAGH/ET	8.8
AM200KXVAGH/ET	8.1
AM220KXVAGH/ET	8.6
AM240KXVAGH/ET	12.5
AM260KXVAGH/ET	12.2
AM100MXVDGH/ET	4.5
AM120MXVDGH/ET	5.3
AM140MXVDGH/ET	5.4
AM160MXVDGH/ET	7.2
AM180MXVDGH/ET	8.8

# 10. Installation

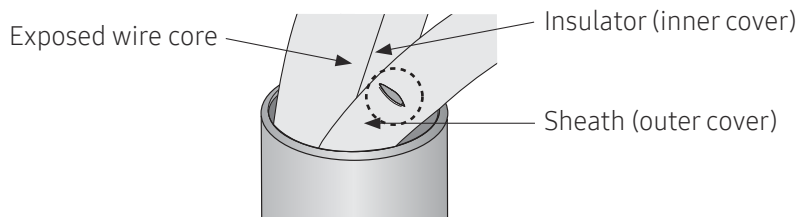
## Electrical wiring work



CAUTION

### Caution for electrical work

- You must install ELCB or MCCB + ELB
  - ELCB: Earth leakage breaker
  - MCCB: Molded case circuit breaker
  - ELB: Earth leakage breaker
- Do not operate the outdoor unit before completing the refrigerant pipe work.
- Do not disconnect or change the cable inside the product. It may cause damage to the product.
- Specification of the power cable is selected based on following installation condition; culvert installation/ ambient temperature 30 °C/ single multi conductor cables. If the condition is different from the ones stated, please consult an electrical installation expert and re-select the power cable.
  - If the length of power cable exceed 50m, re-select the power cable considering the voltage drop.
- Use a power cable made out of incombustible material for the insulator (inner cover) and the sheath (outer cover).
- Do not use the power cable with the core wire exposed due to insulator damage occurred during removal of the sheath. When the core wire is exposed, it may cause fire.



<The example of exposed core wire>

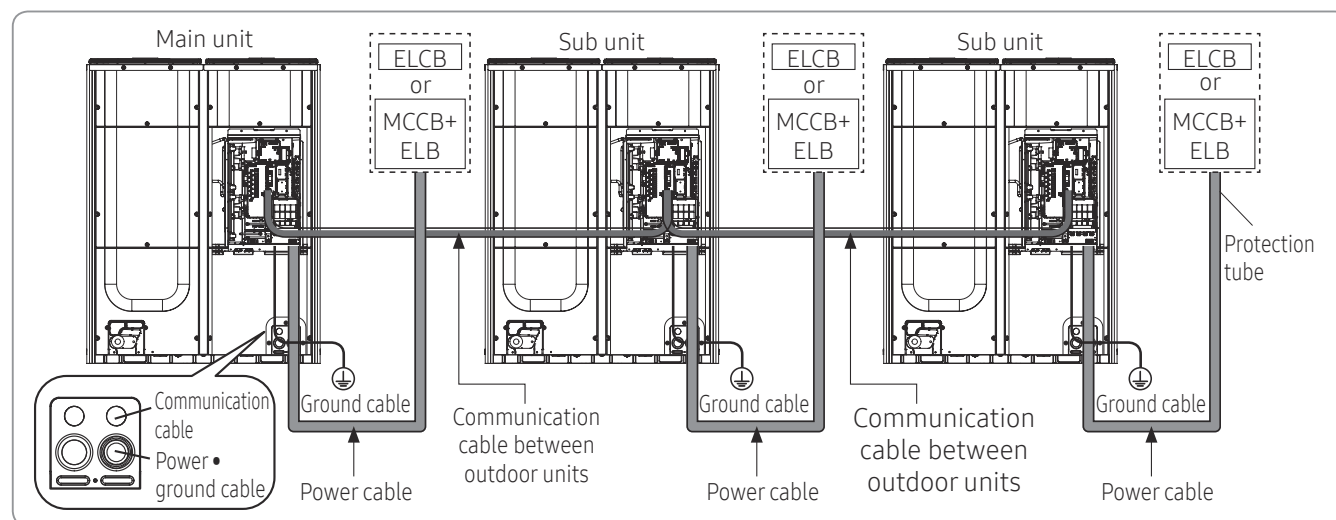


# 10. Installation

## Electrical wiring work

### Power and communication cable configuration

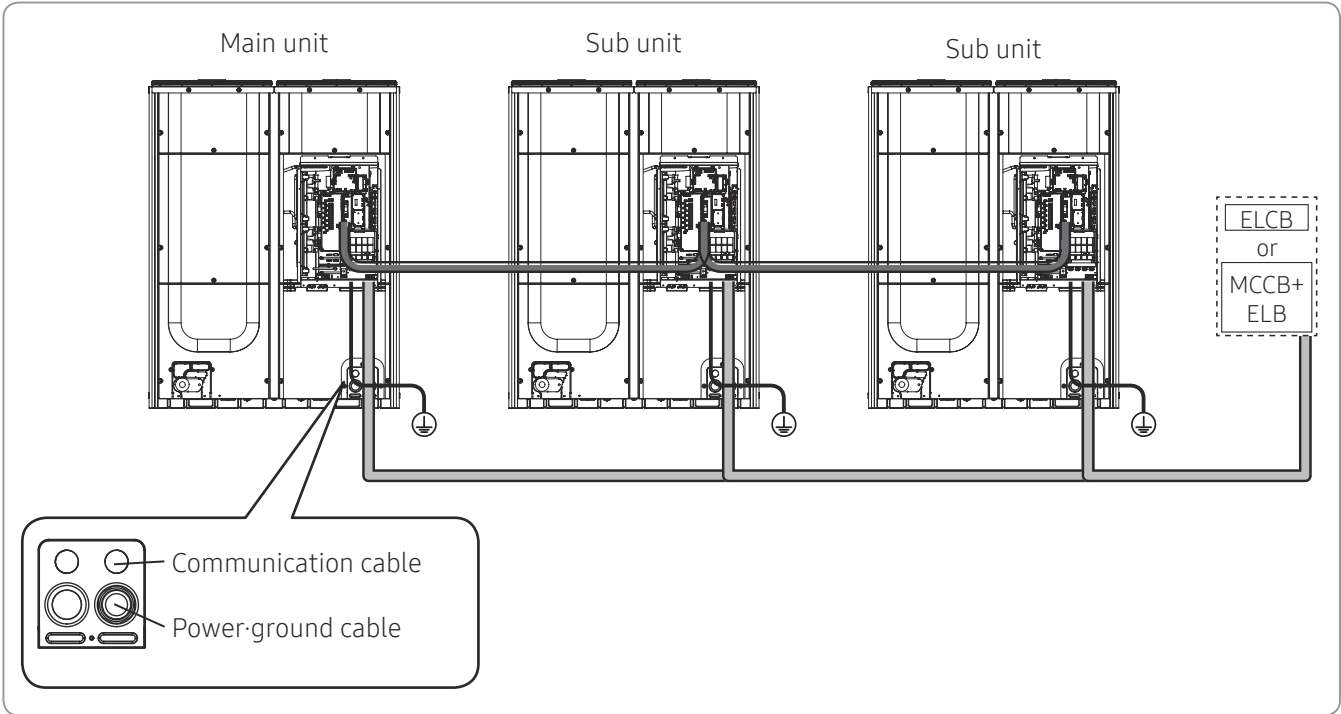
- Main power and the ground cable must be withdrawn through the knock-out hole on the bottom-right or right side of the cabinet.
- Withdraw the communication cable from the designated knock-out hole on the bottom-right side of the front part.
- Install the power and communication cable using separate cable protection tube.
- Fix a protection tube to the knock-out hole on the outdoor unit by using a CD connector or bushing. Make sure to use insulating bushing.




# 10. Installation

## Electrical wiring work

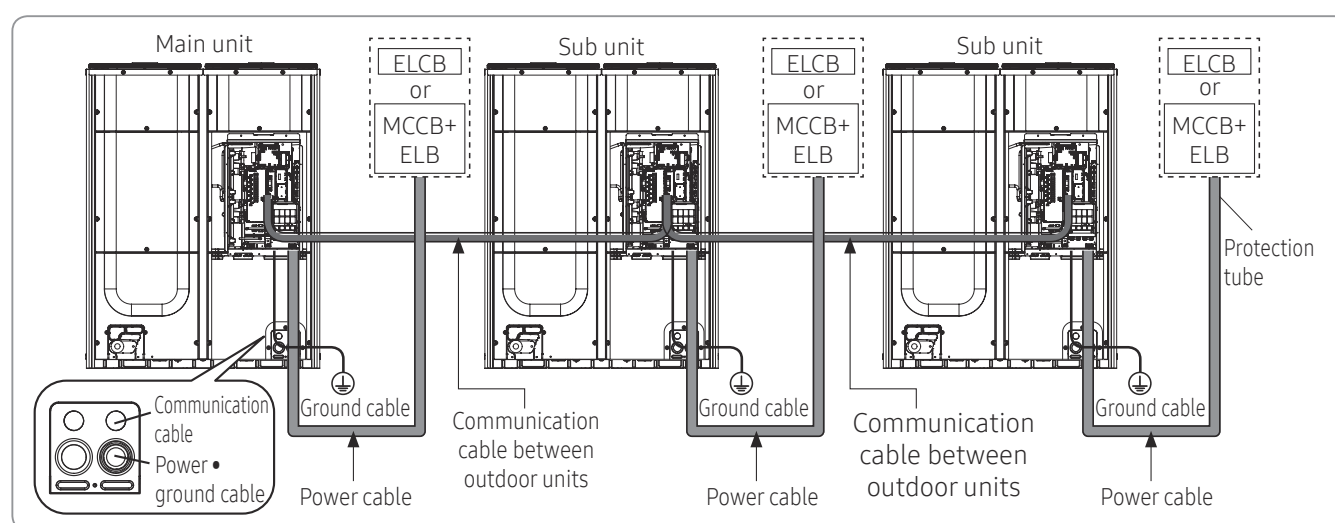
<When the module combination is in the tables of "Outdoor unit combination">



-  Communication cable between outdoor units
-  Protection tube
-  Power cable
-  Power/ground cable

### Specification of the protection tube

Name	Temper grade	Applicable conditions
Flexible PVC conduit	PVC	When the protection tube is installed indoor and not exposed to outside, because it is embedded in concrete structure
Class 1 flexible conduit	Galvanized steel sheet	When the protection tube is installed indoor but exposed to outside so there are risk of damage to the protection tube
Class 1 PVC coated flexible conduit	Galvanized steel sheet and Soft PVC compound	When the protection tube is installed outdoor and exposed to outside so there are risk of damage to the protection tube and extra waterproof is needed



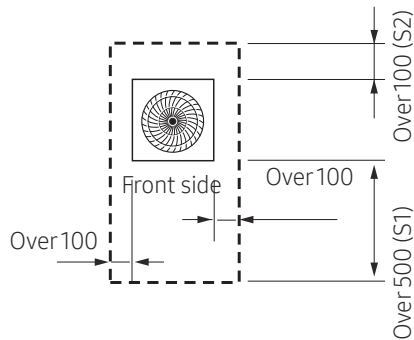
# 10. Installation

## Space requirement for installation

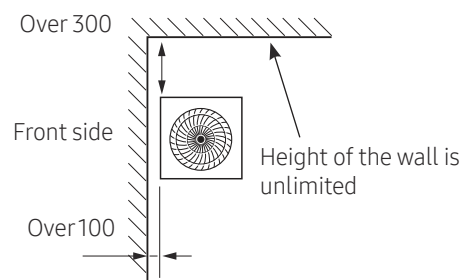
- ▶ Space requirement was decided based on following conditions; Cooling mode, outdoor temperature of 35 °C. Larger space is required if the outdoor temperature is higher than 35 °C or if the place is heated easily by quantity of solar radiation.
- ▶ When you secure installation space, consider path for people and the direction of the wind.
- ▶ Secure installation space as shown in the below illustration, considering ventilation and the service space.
- ▶ If the installation space is narrow, installer or other worker may get injured during work and may also cause problem to the product.
- ▶ If you install multiple number of outdoor units in one space, make sure to secure enough ventilation space if there's any walls around the product that may disturb the air flow. If enough ventilation space is not secured, product may malfunction.
- ▶ You may install the outdoor units with 20mm of space between the product, but product's performance may decrease depending on the installation environment.

## Single installation

(Unit : mm)



<Case 1>

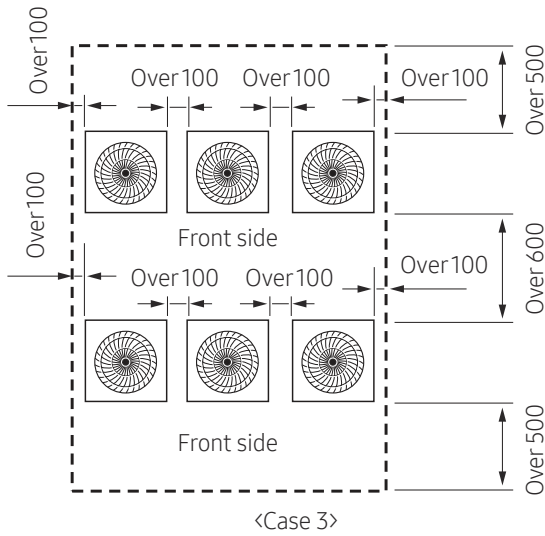
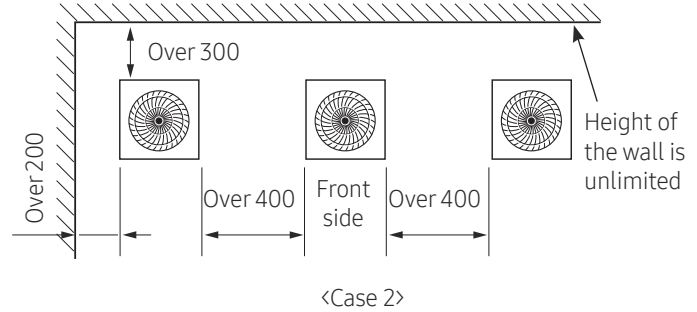
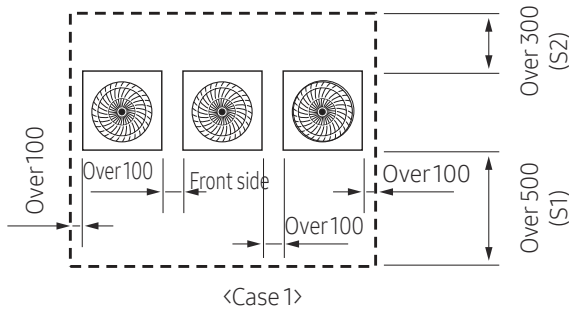


<Case 2>

# 10. Installation

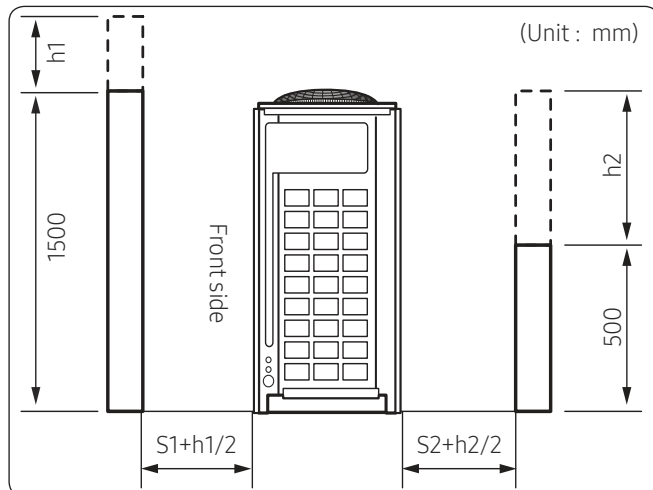
## Space requirement for installation

### Module installation



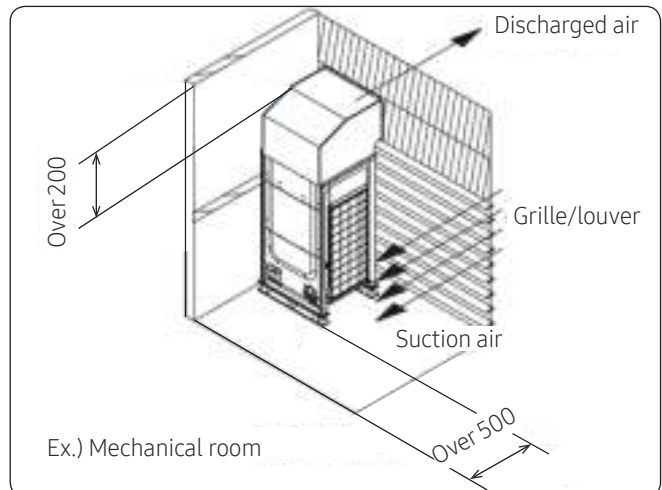
#### ※ For <Case 1> or <Case 3>

- Height of the wall on the front side should not be higher than 1500mm.
- Height of the wall on the air inlet side should not be higher than 500mm.
- Height of the wall on the side is not limited.
- If the height of the wall exceeds by certain value ( $h_1$ ,  $h_2$ ), additional clearance [ $(h_1)/2$ ,  $(h_2)/2$  : Half of the exceeded distance] should be added to the service space ( $S_1$ ,  $S_2$ ).



#### ※ At Machinery Room

- Make sure to install both discharge duct and suction grille / louver
- Static pressure of the discharge duct should be within the standard specification (78.45Pa) when installing the duct.
- Secure enough cross-sectional area on grille surface for easy air intake in case of machinery room installation.



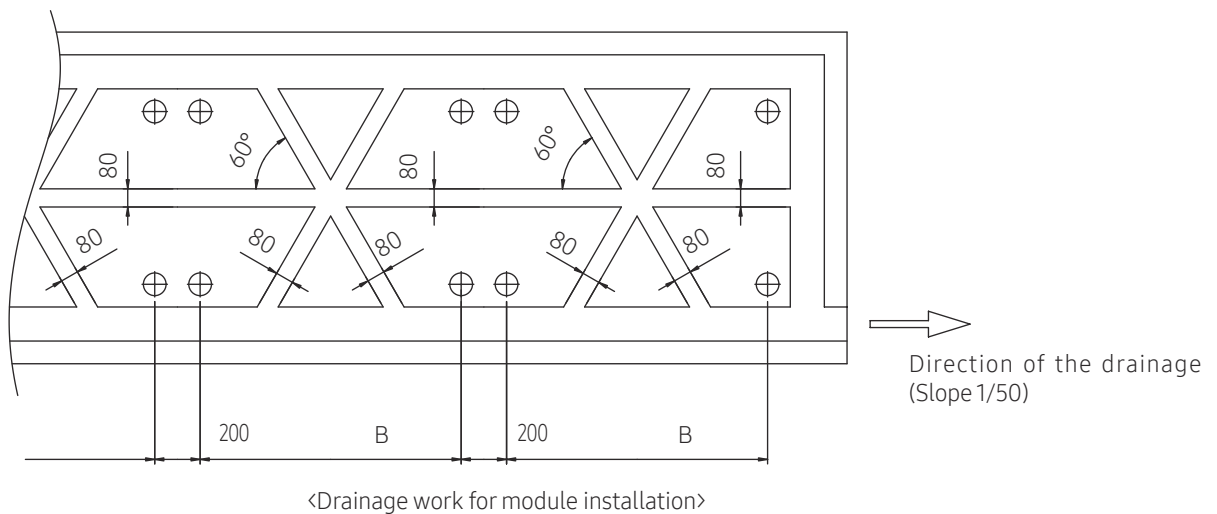
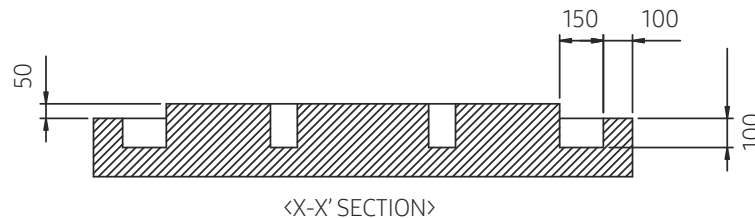
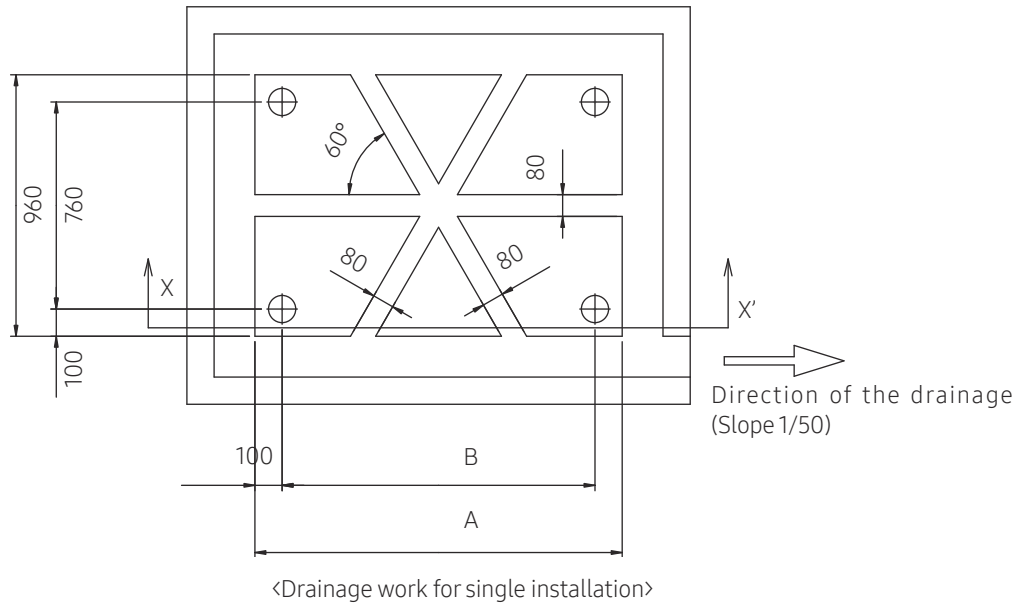
# 10. Installation

## Base construction and installation of the outdoor unit

### Examples of draining work

- ▶ Construct the drainage ditch with reinforced concretes and make sure that water-proofing work is done.
- ▶ For smooth draining of defrost water, make sure to apply 1/50 slope.
- ▶ Construct a drainage around the outdoor unit to prevent the defrost water (from the outdoor unit) from stagnating, overflowing or freezing near the installation space.
- ▶ When the outdoor unit is installed on the roof, check the strength and waterproof status of the roof.

(Unit : mm)



# 10. Installation

## Base construction and installation of the outdoor unit

(Unit : mm)

Classification	DVM S Small Type	DVM S Large A Type	DVM S Large B type
A	940	1,350	1,350
B	740	1,150	1,150



### Cautions regarding on connecting the anchor bolt

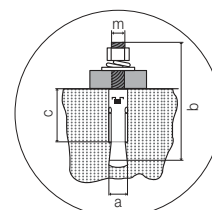
- ▶ Tighten the rubber washer to prevent the bolt connection part of the outdoor unit from corroding.



- ▶ Anchor specification

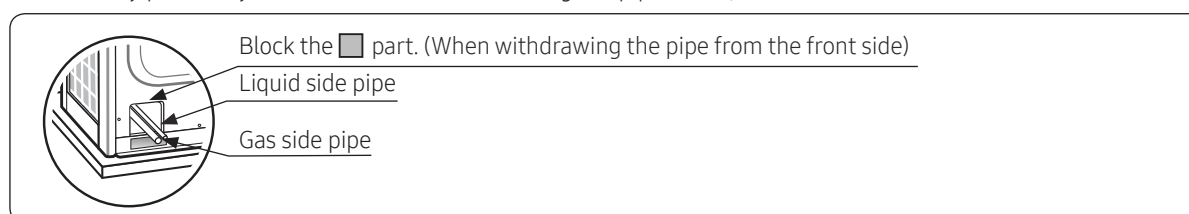
Size	Diameter of drill bit (a)	Anchor length (b)	Sleeve length (c)	Insert depth	Fastening torque
Ø 10	14 mm	75 mm	40 mm	50 mm	30 N·m

- \* Use the anchor bolts and nuts that is zinc plated or made of STS material. Regular anchor bolts or nuts may get damaged by corrosion.



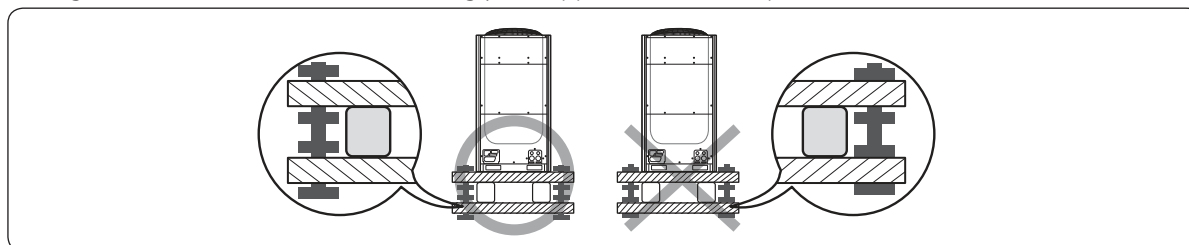
### Cautions regarding on connecting the pipe

- ▶ If you install the outdoor unit on the rooftop, check the strength and make sure to waterproof the rooftop.
- ▶ Construct draining pit around the base construction and pay attention to the drainage around the outdoor unit. (Condensation or defrost water may form during outdoor unit operation.)
- ▶ If there's any possibility of small animals from entering the pipe outlet, block the outlet as shown in the illustration.



### Cautions regarding on anti-vibration frame installation

- ▶ During installation, make sure there is no gap between the base ground and the supporting structures such as anti-vibration frame or H beam.
- ▶ Base ground must be constructed strongly to support the bottom part of the anti-vibration mount.



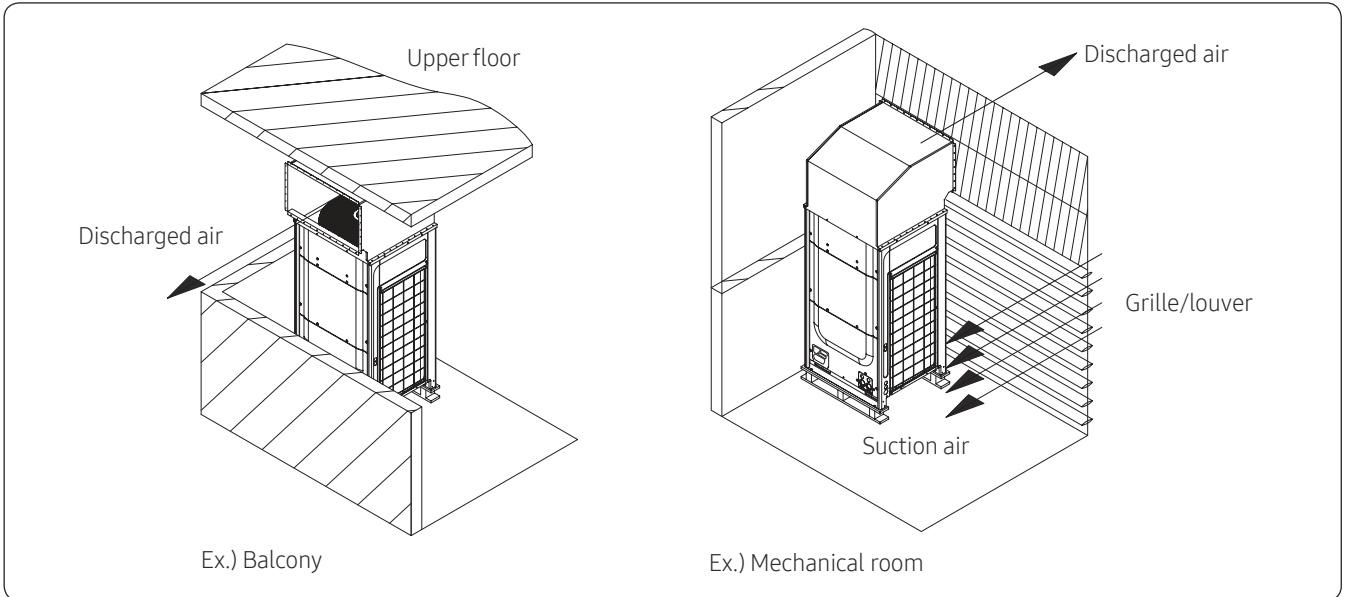
- ▶ After installing the anti-vibration frame, untighten the fixing part on the top and bottom part of the frame.

# 10. Installation

## Wind/snow prevention duct

### Installing the outdoor unit around the obstacles

- It is necessary to install a discharge guide duct(field supply) to direct exhaust from the fan horizontally, when it is difficult to provide a minimum space of 2m between the air outlet and a nearby obstacle.



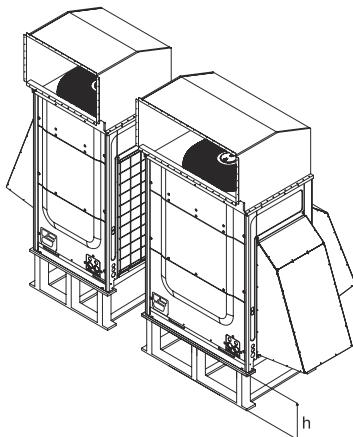
### Installing the outdoor unit in cold region

- In cold regions with lots of snowfall, install a snow prevention duct, as a sufficient countermeasure, to prevent snow from accumulating on the outdoor unit. When the snow prevention duct is not installed, frost may accumulate on the heat exchanger and heating operation may not work normally.
- Air outlet of the duct should not be directed to the enclosed space.



#### Cautions regarding on installing the frame and selecting the base ground

- Height (h) of the frame and the base ground should be higher than the "heaviest expected snowfall".
- Area of the frame and the base ground should not be larger than the are of the outdoor unit. Snow may accumulate if the area of the frame or the base ground is larger.





# 10. Installation

## Wind/snow prevention duct

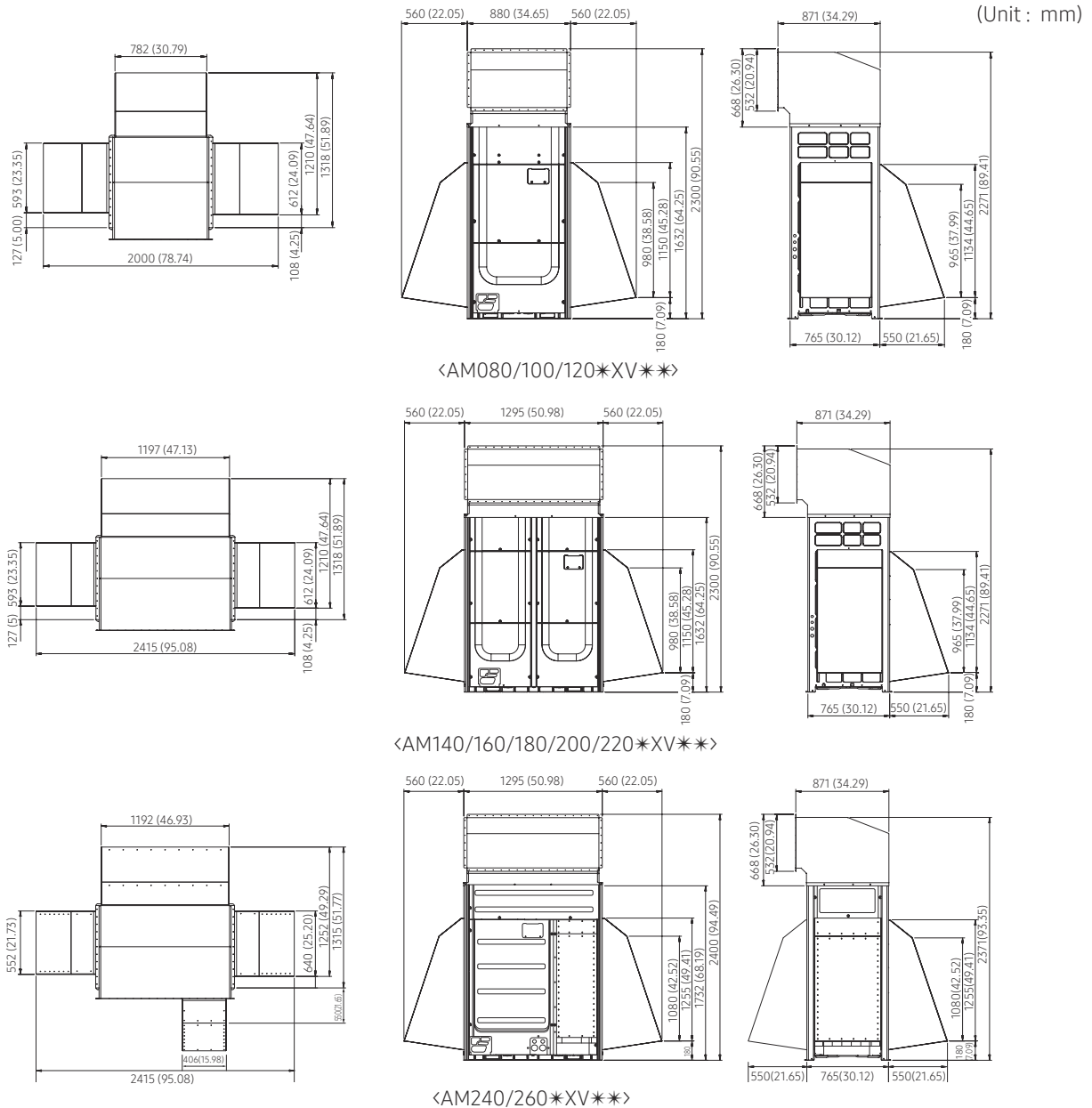
### Installing the outdoor unit in windy region

- ▶ In windy regions such as near sea shores, protection wall or wind protection duct must be installed for normal operation of the outdoor unit. (Refer to the illustration of the snow prevention duct, for installing the wind protection duct.)
- ▶ Install the wind prevention duct with the consideration of major wind direction. If the direction of the discharge part is same as major direction of the wind, it could cause product's performance decrease.



#### Cautions regarding on installing the frame and selecting the base ground

- The base ground must be solid and the outdoor unit must be fixed with anchor bolts.
- Make sure to install outdoor unit in a place strong enough to withstand its weight. If the place cannot withstand the weight of the outdoor unit, outdoor unit may fall and cause personal injury.
- When installing on a rooftop subject to strong wind, countermeasures must be taken to prevent the unit from falling down.
- Use a frame that is resistant to corrosion.



# 10. Installation

## Refrigerant pipe installation

### Refrigerant pipe work

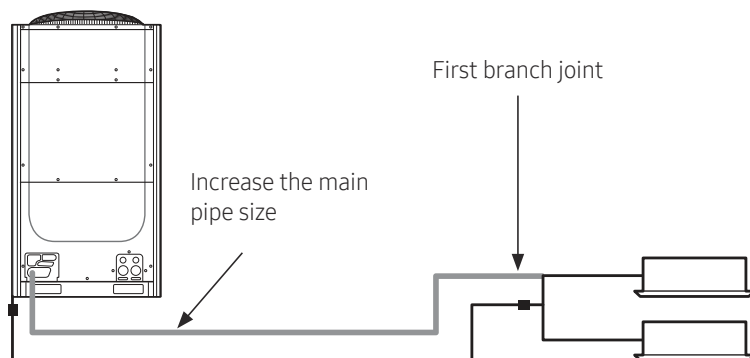
- ▶ The length of refrigerant pipe should be as short as possible and the height difference between an indoor and outdoor unit should be minimized.
- ▶ Piping work must be done within allowable piping length, height difference, and the allowable length after branching.
- ▶ The pressure of the R-410A is high. Use only certified refrigerant pipe and follow the installation method.
- ▶ After installing the pipes, calculate the total length of the pipe to check if additional refrigerant is needed. When you need to charge the additional refrigerant, make sure to use R-410A refrigerant.
- ▶ Use clean refrigerant pipe and there shouldn't be any harmful ion, oxide, dust, iron content or moisture inside pipe.
- ▶ Use tools and accessories that fit on R-410A only.

Tool	Installation process/purpose		Compatibility with conventional tool
Pipe cutter	Refrigerant pipe installation	Pipe cutting	Compatible
Flaring tool		Pipe flaring	
Refrigerant machine oil		Apply refrigerant oil on flared part	Exclusive ether oil, ester oil, alkali benzene oil or synthetic oil
Torque wrench		Connect flare nut with pipe	Compatible
Pipe bender		Pipe bending	
Nitrogen gas	Air tightness test	Prevent oxidation within the pipe	
Welder		Pipe welding	
Manifold gage	Air tightness test ~ additional refrigerant charging	Vacuuming, charging refrigerant and checking operation	Need exclusive one to prevent mixture of R-22 refrigerant oil use and also the measurement is not available due to high pressure
Refrigerant charging hose			Need exclusive one since there is risk of refrigerant leakage or inflow of impurities
Vacuum pump	Pipe drying		Compatible (Use products which contain the check valve to prevent the oil from flowing backward into the outdoor unit.) Use the one that can be vacuumed up to -100.7kpa(5Torr).
Scale for refrigerant charging	Refrigerant charging		Compatible
Gas leak detector	Gas leak test		Need exclusive one (Ones used for R-134a is compatible)
Flare nut	Must use the flare nut equipped with the product. Refrigerant leakage may occur when the conventional flare nut for R-22 is used.		

# 10. Installation

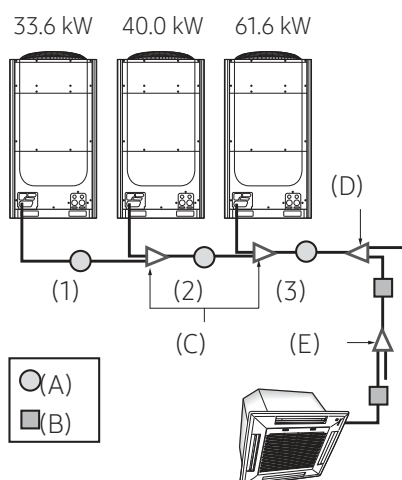
## Refrigerant pipe installation

### Selecting refrigerant pipe



- ▶ Install the refrigerant pipe according to main pipe size of each outdoor unit capacity.
- ▶ When the pipe length (including elbow) between an outdoor unit and the farthest indoor unit exceeds 90m, you must increase the size of the pipe (main pipe) by one grade which connects between the outdoor unit to the first branch joint.
- ▶ For H/R model, When the pipe length (including elbow) between an outdoor unit and the farthest indoor unit exceeds 90m, you must increase the size of the liquid pipe by one grade among the pipes(main pipe) which connects between the outdoor unit to the first branch joint.

### H/P



Ex.) 135.2 kW

Capacity (kW)	No.	Pipe size (mm)	
		Liquid pipe	Gas pipe
33.6 kW	(1)	Ø 12.70	Ø 28.58
73.6 kW	(2)	Ø 19.05	Ø 34.92
135.2 kW	(3)	Ø 19.05	Ø 41.28

# 10. Installation

## Refrigerant pipe installation

### Size of the pipe connected to the outdoor unit (A)

Select the size of the main pipe according to the below table.

Outdoor unit capacity (kW) (Cooling)	*Maximum pipe length within 90m		*Maximum pipe length over 90m			
	Liquid pipe (mm)	gas pipe (mm)	Liquid pipe (mm)	gas pipe (mm)		
22.4 kW	Ø 9.52	Ø 19.05	Ø 12.70	Ø 22.22		
22.5 kW ~ 28.1 kW		Ø 22.22		Ø 25.40 <small>note1)</small>		
28.2 kW ~ 33.6 kW	Ø 12.70	Ø 28.58	Ø 15.88	Ø 28.58		
33.7 kW ~ 40.0 kW				Ø 31.75 <small>note2)</small>		
40.1 kW ~ 45.0 kW			Ø 19.05			
45.1 kW ~ 50.4 kW	Ø 15.88					
50.5 kW ~ 56.0 kW						
56.1 kW ~ 63.3 kW	Ø 34.92		Ø 38.10 <small>note3)</small>			
63.4 kW ~ 70.3 kW		Ø 22.22				
70.4 kW ~ 98.4 kW	Ø 41.28					
98.5 kW ~ 135.2 kW			Ø 53.98			
135.3 kW ~ 169.0 kW	Ø 25.40 <small>note1)</small>					
169.1 kW ~ 252.0 kW			Ø 53.98			

\*Maximum pipe length : The pipe length between an outdoor unit and the farthest indoor unit.

Note1) If Ø 25.40 pipe is not available on site, use Ø 28.58 pipe.

Note2) If Ø 31.75 pipe is not available on site, use Ø 34.92 pipe.

Note3) If Ø 38.10 pipe is not available on site, use Ø 41.28 pipe

# 10. Installation

## Refrigerant pipe installation

### Size of the pipe between branch joints (B)

Select the pipe size according to the sum of indoor unit capacity which will be connected after the branch.

✱ However, if the size of the pipe between branch joints (B) is bigger than the size of the pipe connected to the outdoor unit (A), apply the pipe size (A).

Indoor unit capacity (kW)	Branch pipe length within 45m		Branch pipe length between 45~90m	
	Liquid pipe (mm)	Gas pipe (mm)	Liquid pipe (mm)	Gas pipe (mm)
15.0 kW and below	Ø 9.52	Ø 15.88	Ø 12.70	Ø 19.05
15.1 kW ~ 22.4 kW		Ø 19.05		Ø 22.22
22.5 kW ~ 28.1 kW		Ø 22.22		Ø 25.40 <sup>note1)</sup>
28.2 kW ~ 40.0 kW	Ø 12.70	Ø 28.58	Ø 15.88	Ø 28.58
40.1 kW ~ 45.0 kW				Ø 31.75 <sup>note2)</sup>
45.1 kW ~ 63.3 kW	Ø 15.88	Ø 34.92	Ø 19.05	Ø 38.10 <sup>note3)</sup>
63.4 kW ~ 70.3 kW				
70.4 kW ~ 98.4 kW	Ø 19.05	Ø 41.28	Ø 22.22	Ø 41.28
98.5 kW ~ 135.2 kW				Ø 53.98
135.3 kW ~ 169.0 kW				
Over 169.0 kW	Ø 22.22	Ø 53.98	Ø 25.40 <sup>note1)</sup>	

<sup>Note1)</sup> If Ø 25.40 pipe is not available on site, use Ø 28.58 pipe.

<sup>Note2)</sup> If Ø 31.75 pipe is not available on site, use Ø 34.92 pipe.

<sup>Note3)</sup> If Ø 38.10 pipe is not available on site, use Ø 41.28 pipe

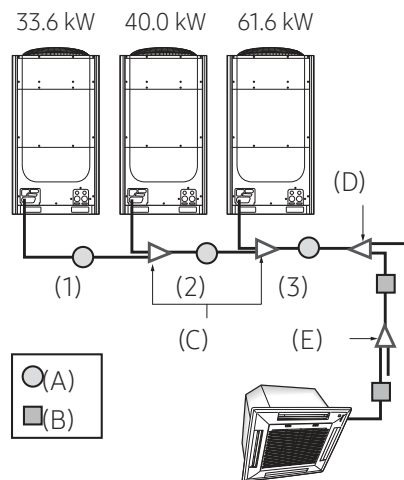
### Size of the pipe between the branch joint and the indoor unit

Make a selection according to outdoor unit capacity.

Indoor unit capacity (kW)	Pipe size (O.D. mm)	
	Liquid pipe	Gas pipe
6.0 kW and below	Ø 6.35	Ø 12.70
6.1 kW ~ 16.0 kW	Ø 9.52	Ø 15.88
16.1 kW ~ 23.0 kW	Ø 9.52	Ø 19.05
Over 23.0 kW	Ø 9.52	Ø 22.22

# 10. Installation

## Refrigerant pipe installation



### Branch joint

- Branch joint between outdoor units (C)

Classification	Model name	Specification (kW)
Y-joint for outdoor unit (C)	MXJ-TA3419M	135.2 kW and below
	MXJ-TA4122M	Over135.2 kW

- First branch joint (D)

Make a selection according to outdoor unit capacity.

Classification	Outdoor unit capacity (kW)	Model name of the branch joint
Y-joint (D)	40.0 kW and below	MXJ-YA2512M
	40.1 kW ~ 45.0 kW	MXJ-YA2812M
	45.1 kW ~ 67.2 kW	MXJ-YA2815M
	67.3 kW ~ 95.2 kW	MXJ-YA3419M
	95.3 kW ~ 135.2 kW	MXJ-YA4119M
	Over135.2 kW	MXJ-YA4422M

# 10. Installation

## Refrigerant pipe installation

### ► Branch joint (E)

Select a branch joint according to the sum of indoor unit capacity which will be connected after the branch.

✱ However, if the size of the pipe between branch joints (E) is bigger than the size of the pipe connected to the outdoor unit (D), apply the pipe size (D).

#### 1) Y-joint

Classification	Model name	Specification (kW)
Y-joint (E)	MXJ-YA1509M	15.0 kW and below
	MXJ-YA2512M	15.1 kW ~ 40.0 kW
	MXJ-YA2812M	40.1 kW ~ 45.0 kW
	MXJ-YA2815M	45.1 kW ~ 70.3 kW
	MXJ-YA3419M	70.4 kW ~ 98.4 kW
	MXJ-YA4119M	98.5 kW ~ 135.2 kW
	MXJ-YA4422M	Over 135.2 kW

#### 2) Distribution header

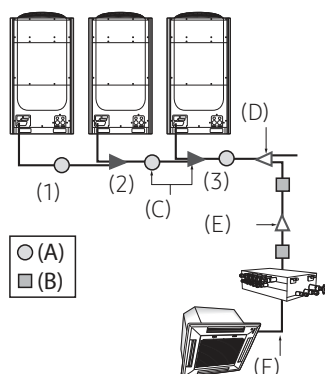
Classification	Model name	Specification (kW)
Distribution header (E)	MXJ-HA2512M	45.0 kW and below (for 4 rooms)
	MXJ-HA3115M	70.3 kW and below (for 8 rooms)
	MXJ-HA3819M	70.4 kW ~ 135.2 kW (for 8 rooms)

# 10. Installation

## Refrigerant pipe installation

H/R

33.6 kW 40.0 kW 61.6 kW



Ex.) 135.2 kW

Capacity (kW)	No.	Pipe size (mm)		
		Liquid pipe	Low pressure gas pipe	High pressure gas pipe
33.6 kW	(1)	Ø 12.70	Ø 28.58	Ø 19.05
73.6 kW	(2)	Ø 19.05	Ø 34.92	Ø 28.58
135.2 kW	(3)	Ø 19.05	Ø 41.28	Ø 34.92

### Size of the pipe connected to the outdoor unit (A)

Select the size of the pipe according to the below table.

Outdoor unit capacity (kW) (Cooling)	*Maximum pipe length within 90m			*Maximum pipe length over 90m		
	Liquid pipe (mm)	Low pressure gas pipe (mm)	High pressure gas pipe (mm)	Liquid pipe (mm)	Low pressure gas pipe (mm)	High pressure gas pipe (mm)
22.4 kW	Ø 9.52	Ø 19.05	Ø 15.88	Ø 12.70	Ø 19.05	Ø 15.88
22.5 kW ~ 28.1 kW		Ø 22.22	Ø 19.05		Ø 22.22	Ø 19.05
28.2 kW ~ 33.6 kW	Ø 12.70	Ø 28.58	Ø 22.22	Ø 15.88	Ø 28.58	Ø 22.22
33.7 kW ~ 40.0 kW			Ø 22.22			Ø 22.22
40.1 kW ~ 45.0 kW	Ø 15.88	Ø 28.58	Ø 28.58	Ø 19.05	Ø 34.92	Ø 28.58
45.1 kW ~ 50.4 kW						
50.5 kW ~ 56.0 kW	Ø 19.05	Ø 41.28	Ø 34.92	Ø 22.22	Ø 41.28	Ø 34.92
56.1 kW ~ 63.3 kW						
63.4 kW ~ 70.3 kW	Ø 22.22	Ø 53.98	Ø 53.98	Ø 25.40 <sup>note1)</sup>	Ø 53.98	Ø 53.98
70.4 kW ~ 98.4 kW						
98.5 kW ~ 135.2 kW	Ø 22.22	Ø 53.98	Ø 53.98	Ø 25.40 <sup>note1)</sup>	Ø 53.98	Ø 53.98
135.3 kW ~ 169.0 kW						
169.1 kW ~ 252.0 kW	Ø 22.22	Ø 53.98	Ø 53.98	Ø 25.40 <sup>note1)</sup>	Ø 53.98	Ø 53.98
169.1 kW ~ 252.0 kW						

\*Maximum pipe length : The pipe length between an outdoor unit and the farthest indoor unit.

Note1) If Ø 25.40 pipe is not available on site, use Ø 28.58 pipe.

\* For HR model, only increase the size of the liquid pipe if pipe length exceeds 90m

\* For the case that the diameter of the default pipe of an outdoor unit does not match that of the pipe installed on the site, a socket is provided by default together with the outdoor unit.



# 10. Installation

## Refrigerant pipe installation

H/R

### Size of the pipe between branch joints (B)

Select the pipe size according to the sum of indoor unit capacity which will be connected after the branch.

✱ However, if the size of the pipe between branch joints (B) is bigger than the size of the pipe connected to the outdoor unit (A), apply the pipe size (A).

Outdoor unit capacity (kW) (Cooling)	Pipe size (mm)		
	Liquid pipe	Low pressure gas pipe	High pressure gas pipe
15.0 kW and below	Ø 9.52	Ø15.88	Ø 15.88
15.1 kW ~ 22.4 kW		Ø19.05	
22.5 kW ~ 28.1 kW		Ø 22.22	Ø 19.05
28.2 kW ~ 33.6 kW	Ø12.70	Ø 28.58	
33.7 kW ~ 45.0 kW			Ø 22.22
45.1 kW ~ 50.4 kW	Ø 15.88	Ø 28.58	
50.5 kW ~ 63.3 kW			Ø 34.92
63.4 kW ~ 70.3 kW	Ø19.05	Ø 41.28	
70.4 kW ~ 98.4 kW			Ø 34.92
98.5 kW ~ 135.2 kW		Ø 41.28	
135.3 kW ~ 169.0 kW	Ø 53.98		
Over 169.0 kW		Ø 22.22	Ø 41.28

### Size of the pipe between the branch joint and the indoor unit

Make a selection according to outdoor unit capacity.

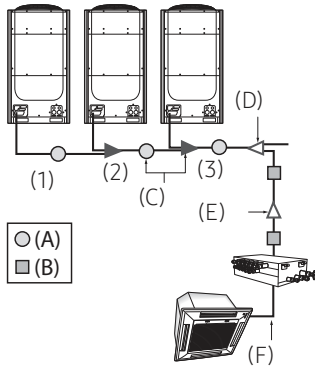
Indoor unit capacity (kW)	Pipe size (O.D. mm)	
	Liquid pipe	Gas pipe
6.0 kW and below	Ø 6.35	Ø 12.70
6.1 kW ~ 16.0 kW	Ø 9.52	Ø 15.88
16.1 kW ~ 23.0 kW	Ø 9.52	Ø 19.05
Over 23.0 kW	Ø 9.52	Ø 22.22

# 10. Installation

## Refrigerant pipe installation

### H/R

33.6 kW 39.2 kW 44.8 kW



### Branch joint

- Branch joint between outdoor units (C)

Classification	Model name	Specification (kW)
Liquid/Low pressure Y-joint (C)	MXJ-TA3419M	135.2 kW and below
	MXJ-TA4122M	Over 135.2 kW
High pressure Y-joint (C)	MXJ-TA3100M	135.2 kW and below
	MXJ-TA3800M	Over 135.2 kW

- First branch joint (D)

Make a selection according to outdoor unit capacity.

Classification	Outdoor unit capacity (kW)	Model name of the branch joint
Liquid/Low pressure Y-joint (D)	40.0 kW and below	MXJ-YA2512M
	40.1 kW ~ 45.0 kW	MXJ-YA2812M
	45.1 kW ~ 67.2 kW	MXJ-YA2815M
	67.3 kW ~ 95.2 kW	MXJ-YA3419M
	95.3 kW ~ 135.2 kW	MXJ-YA4119M
	Over 135.2 kW	MXJ-YA4422M
High pressure Y-joint (D)	22.4 kW	MXJ-YA1500M
	22.5 kW ~ 67.2 kW	MXJ-YA2500M
	67.3 kW ~ 135.2 kW	MXJ-YA3100M
	Over 135.2 kW	MXJ-YA3800M

- Branch joint (E)

Select a branch joint according to the sum of indoor unit capacity which will be connected after the branch.

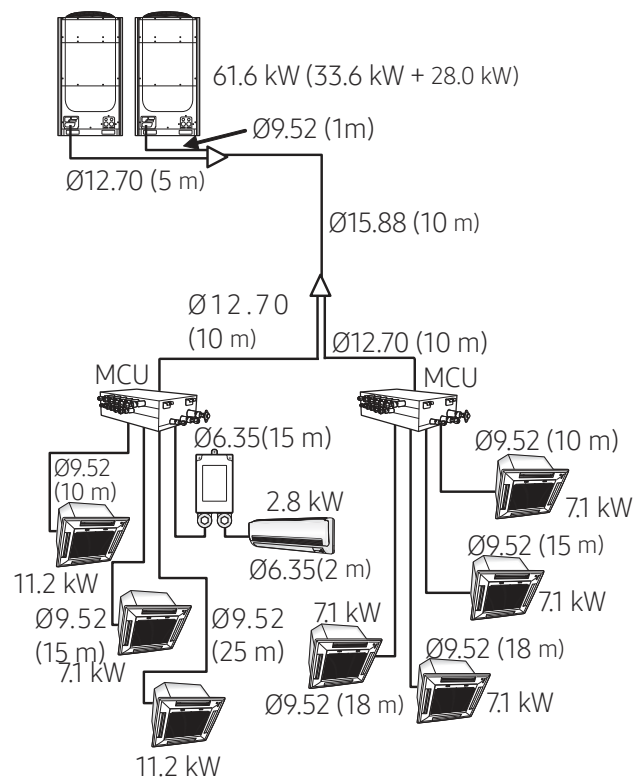
- \* However, if the size of the pipe between branch joints (E) is bigger than the size of the pipe connected to the outdoor unit (D), apply the pipe size (D).

- Y-joint

Classification	Model name	Specification (kW)
Y-joint (E)	MXJ-YA1509M	15.0 kW and below
	MXJ-YA2512M	15.1 kW ~ 40.0 kW
	MXJ-YA2812M	40.1 kW ~ 45.0 kW
	MXJ-YA2815M	45.1 kW ~ 70.3 kW
	MXJ-YA3419M	70.4 kW ~ 98.4 kW
	MXJ-YA4119M	98.5 kW ~ 135.2 kW
	MXJ-YA4422M	Over 135.2 kW
Y-joint (E) (Only H/R)	MXJ-YA1500M	22.4 kW and below
	MXJ-YA2500M	22.5 kW ~ 70.3 kW
	MXJ-YA3100M	70.4 kW ~ 135.2 kW
	MXJ-YA3800M	Over 135.2 kW

## Refrigerant pipe installation

H/P



# 10. Installation

## Refrigerant pipe installation

### Refrigerant pipe installation

- Basic amount of refrigerant within the outdoor unit (kg)

- Amount of additional refrigerant has to be calculated based on the sum of all liquid pipe length.

Classification	AM080JXVHGH/ET	AM100JXVHGH/ET	AM120JXVHGH/ET	AM140JXVHGH/ET	AM160JXVHGH/ET	AM180JXVHGH/ET
Basic amount	6.5	6.5	6.5	9.4	9.4	8.4
Classification	AM200JXVHGH/ET	AM220JXVHGH/ET	AM240KXVGGH/ET	AM260KXVGGH/ET		
Basic amount	11	11	14	14		
Classification	AM080JXVAGH/ET	AM100JXVAGH/ET	AM120JXVAGH/ET	AM140KXVAGH/ET	AM160KXVAGH/ET	AM180KXVAGH/ET
Basic amount	5.5	5.5	6.5	7.7	8.4	8.4
Classification	AM200KXVAGH/ET	AM220KXVAGH/ET	AM240KXVAGH/ET	AM260KXVAGH/ET		
Basic amount	8.4	8.4	14	14		
Classification	AM100MXVDGH/ET	AM120MXVDGH/ET	AM140MXVDGH/ET	AM160MXVDGH/ET	AM180MXVDGH/ET	
Basic amount	5.5	6.5	7.7	8.4	8.4	
Classification	AM080JXVHGR/ET	AM100JXVHGR/ET	AM120JXVHGR/ET	AM140JXVHGR/ET	AM160JXVHGR/ET	AM180JXVHGR/ET
Basic amount	6.5	6.5	6.5	9.4	9.4	8.4
Classification	AM200JXVHGR/ET	AM220JXVHGR/ET	AM240MXVGNR/ET	AM260MXVGNR/ET		
Basic amount	11	11	14	14		

- Amount of additional refrigerant depending on the pipe size (㊤)

- Amount of additional refrigerant has to be calculated based on the sum of all liquid pipe length.

Size of liquid pipe	Ø 6.35	Ø 9.52	Ø 12.70	Ø 15.88	Ø 19.05	Ø 22.22	Ø 25.40	Ø 28.58
Additional amount (kg/m)	0.02	0.06	0.125	0.18	0.27	0.35	0.53	0.65

- For the indoor unit already connected to EEV kit, the additional refrigerant charging is 0.01kg per meter regardless of the pipe size.

# 10. Installation

## Refrigerant pipe installation

► Amount of additional refrigerant for each indoor unit (㉔)

(Unit : kg)

Capacity(kW) Model	1.5	1.7	2.2	2.8	3.2	3.6	4.5	5.6	6	7.1	8.2	9	9.3	11.2	12.8	14	16	18	22	22.4	28	32	50	500 CMH	1000 CMH
Slim 1way cassette (JSF) (AMXXXFN1DEXX) (AMXXXJN1DEXX)			0.25	0.25		0.25		0.32		0.32															
Interior 1way cassette (AMXXXHN1DEXX)		0.15	0.15																						
2way cassette (AMXXXFN2DEXX)								0.31		0.47															
4Way Cassette S (AMXXXFN4DEXX)							0.45	0.45		0.45		0.45		0.57	0.69	0.69									
360 Cassette (AMXXXKN4DEXX)							0.45	0.45		0.45		0.45		0.69	0.69	0.69									
Floor Standing Unit (AMXXXNFDEXX)						0.22		0.32		0.32															
ERV plus (AMXXXFNKDEXX)																								0.11	0.36
4way cassette S (600 x 600) (AMXXXFNDEXX)	0.29		0.29	0.29		0.29	0.37	0.37	0.37																
Duct S (AMXXXHNMPKXX) (AMXXXHNMPKX9X)						0.22	0.22	0.22		0.22		0.31		0.38	0.38	0.38									
Duct S (AMXXXHNMPKXX) (AMXXXHNMPKX9X)					0.31	0.31	0.38	0.38		0.38															
Duct S (AMXXXHNMPKXX) (AMXXXHNMPKX9X)														0.38	0.38	0.38									
Slim duct (AMXXXFNLDEXX)		0.17	0.17	0.17		0.26	0.35	0.35		0.45		0.42		0.42	0.62	0.62									
Slim duct (with drain pump) (AMXXXKNLDEXX)						0.35	0.35			0.45		0.42		0.42	0.62	0.62									
MSP duct (AMXXXNMDEXX)			0.24	0.24		0.24	0.28	0.28		0.28		0.32		0.54	0.68	0.68	0.91								
MSP duct (with drain pump) (AMXXXKNMDEXX)			0.24	0.24		0.24	0.28	0.28		0.28		0.32		0.54	0.68	0.68	0.91								
Home Duct (AMXXXKNLDEH)		0.13	0.13	0.13		0.17																			
Ceiling (AMXXXFNCDKXX / AMXXXJNCDKXX)								0.39		0.39				0.56		0.95									
Console (AMXXXNJDKXX)			0.16	0.27		0.27	0.27	0.27																	
Neo forte (AMXXXFNTDEXX)	0.24		0.24	0.24		0.24		0.36		0.36															
Neo forte (with EEV) (AMXXXFNQDEXX)	0.34		0.34	0.34		0.34	0.51	0.51		0.51															
AR5000 (AMXXXJNADKXX)	0.16		0.16	0.19		0.25	0.25	0.52		0.52	0.52														
AR5000 (with EEV) (AMXXXJNVDKXX)	0.22		0.22	0.25		0.34	0.34	0.71		0.71	0.71														
New Boracay (AMXXXKNTDEXX)	0.24		0.24	0.32		0.32	0.49	0.49		0.49															
New Boracay (with EEV) (AMXXXKNQDEXX)	0.24		0.24	0.32		0.32	0.49	0.49		0.49															
MAX 4 (with EEV) (AMXXXMNQDEXX)													0.49												
HSP duct (AMXXXFNHDEXX)														0.68	0.68	0.68			1.18		1.18				
OAP duct (AMXXXJNEPEXX)																0.68			1.18		1.18				
Big duct (AMXXXJNHFKXX)																		1.15		1.15					
Hydro Unit HE (AMXXXFNBDXX)																	0.6						0.7	1.2	
Hydro Unit HT (AMXXXFNBFXX)	0.6 <sup>note1)</sup>																								
MCU (MCU-SXNEXXN)	0.5																								

► If AHU kit is included among the indoor units, you must add 0.063kg of refrigerant for every 1kW of the AHU capacity increase.

<sup>Note1)</sup> In case the capacity conjunction of the Hydro Unit HT exceeds 50 % among the total indoor unit, please don't put the additional refrigerant.

# 10. Installation

## Refrigerant pipe installation

► Method to calculate total amount of additional refrigerant

- Amount of additional refrigerant depending on the pipe length (㉑)
- Amount of additional refrigerant for each indoor unit (㉒) =  $\Sigma$ (Amount of additional refrigerant for each connected indoor unit) \* Refer to the table
- Total amount of additional refrigerant = ㉑+㉒

\* Sum of total amount of additional refrigerant and the basic amount of refrigerant should not exceed 100kg. If the refrigerant exceeds 100kg, separate the module so that weight of the refrigerant doesn't exceed 100kg.

Ex.) For AM200FXVAG\*, basic amount of refrigerant is 8.4kg, therefore total amount of additional refrigerant (㉑+㉒) should not exceed 91.6 kg.

► Example of refrigerant calculation for HP models

Classification	Size of liquid pipe	Length (m)	Unit amount of refrigerant (kg/m)	Amount of additional refrigerant (kg)	Total amount of additional refrigerant (kg)
		㉑	㉒	㉑×㉒	$\Sigma(㉑ \times ㉒)$
Liquid pipe (㉑)	Ø 6.35	35	0.02	0.7	㉑ 5.575
	Ø 9.52	50	0.06	3.0	
	Ø 12.70	15	0.125	1.875	

Classification	Model name of indoor unit	Number of units	Unit amount of refrigerant (kg/EA)	Amount of additional refrigerant (kg)	Total amount of additional refrigerant (kg)
		㉑	㉒	㉑×㉒	$\Sigma(㉑ \times ㉒)$
Indoor unit (㉒)	4way cassette (AM071FN4DEH*)	4	0.45	1.80	㉒ 3.10
	Slim duct (AM056FNLDEH*)	2	0.35	0.70	
	Slim duct (AM045FNLDEH*)	1	0.35	0.35	
	1way cassette (AM036FN1DEH*)	1	0.25	0.25	

- Total amount of refrigerant (㉑+㉒) = 5.575+3.10 = 8.675 (kg)

► Example of refrigerant calculation for HR models

Classification	Size of liquid pipe	Length (m)	Unit amount of refrigerant (kg/m)	Amount of additional refrigerant (kg)	Total amount of additional refrigerant (kg)
		㉑	㉒	㉑×㉒	$\Sigma(㉑ \times ㉒)$
Liquid pipe (㉑)	Ø 6.35	15	0.02	0.3	㉑ 11.965
	Ø 9.52	112	0.06	6.72	
	Ø 12.70	25	0.125	3.125	
	Ø 15.88	10	0.18	1.8	
	Ø 6.35 (EEV Kit ~ indoor unit)	2	0.01	0.02	

# 10. Installation

## Refrigerant pipe installation

Classification	Model name of indoor unit	Number of units	Unit amount of refrigerant (kg/EA)	Amount of additional refrigerant (kg)	Total amount of additional refrigerant (kg)
		①	②	①×②	Σ(①×②)
Indoor unit (b)	4way cassette (AM071FN4DEH*)	5	0.45	2.25	b 4.66
	4way cassette (AM112FN4DEH*)	2	0.57	1.14	
	Neo forte (AM028FNTDEH*)	1	0.27	0.27	
	MCU	2	0.5	1	

- Total amount of refrigerant (a+b) = 11.965+4.66 = 16.625 (kg)

## Temper grade and minimum thickness of the refrigerant pipe

Outer diameter (mm)	Minimum thickness (mm)	Temper grade
Ø 6.35	0.70	Annealed
Ø 9.52	0.70	
Ø 12.70	0.80	
Ø 15.88	1.00	
Ø 19.05	0.90	Drawn
Ø 22.22	0.90	
Ø 25.40	1.00	
Ø 28.58	1.10	
Ø 31.75	1.10	
Ø 34.92	1.21	
Ø 38.10	1.35	
Ø 41.28	1.43	
Ø 44.45	1.60	
Ø 50.80	2.00	
Ø 53.98	2.10	



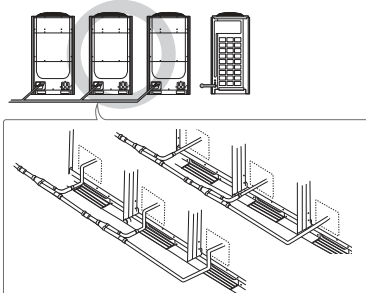
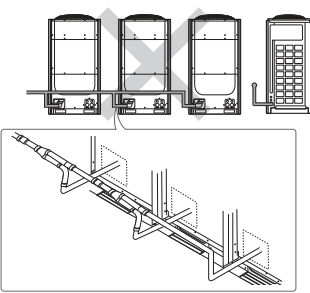
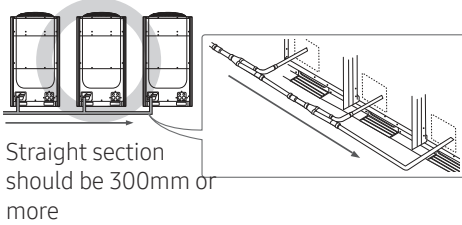
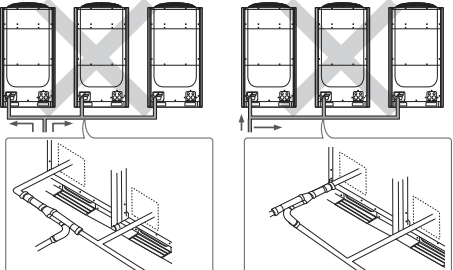
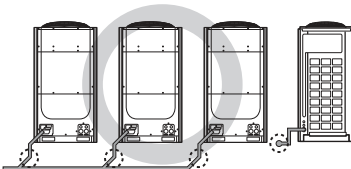
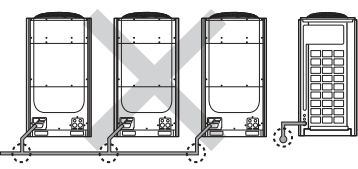
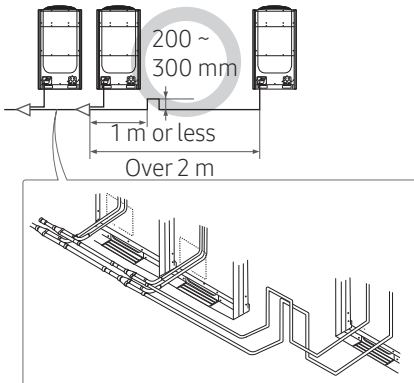
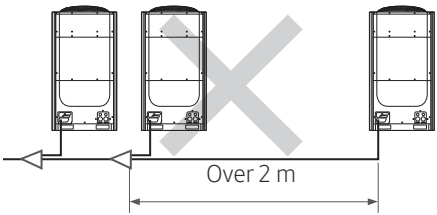
- For pipes larger than Ø 19.05, drawn type (C1220T-1/2H or C1220T-H) type copper pipe must be used. If a annealed type (C1220T-O) copper pipe is used, pipe may break due to its low pressure resistance and cause personal injury.

# 10. Installation

## Additional refrigerant

Pipe installation between the outdoor units

- ▶ You will need branch joints, which is an optional accessory, for connecting in between outdoor units in order to combine outdoor units in module.
- ※ **For optimal distribution of the refrigerant, you must use Y-joint as branch joint for connecting outdoor units. (Do not use T-joint)**
- ▶ When you install the outdoor units in module, there is no restriction of installation order among outdoor units.
- ▶ Height of the connection pipe should be same or lower than the ones connected to the outdoor units.
- ▶ Check the changes in comparison with the DVM II, III and IV.

Caution	Correct installation	Incorrect installation
Refrigerant pipes should be connected at the same or lower level than the ones connected to the outdoor unit.		
Refrigerant pipes must be connected by the side of the product.		
Branch joint between outdoor units must be installed horizontally.		
When the piping length between outdoor unit and the branch joint exceeds 2m, install a vertical trap as show in the figure.		



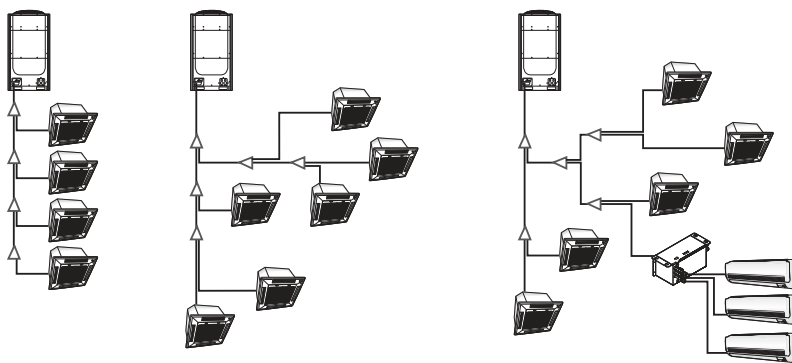
# 10. Installation

## Refrigerant pipe installation

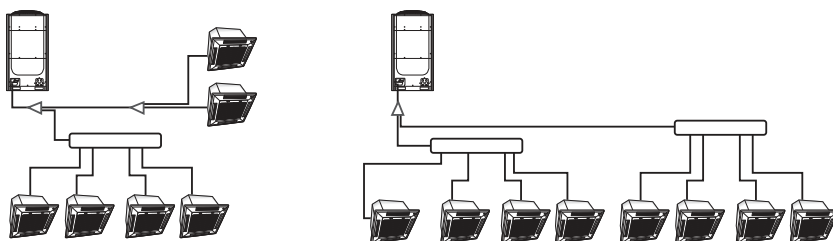
### Examples of refrigerant pipe installation

#### H/P

##### 1. Using Y-joint

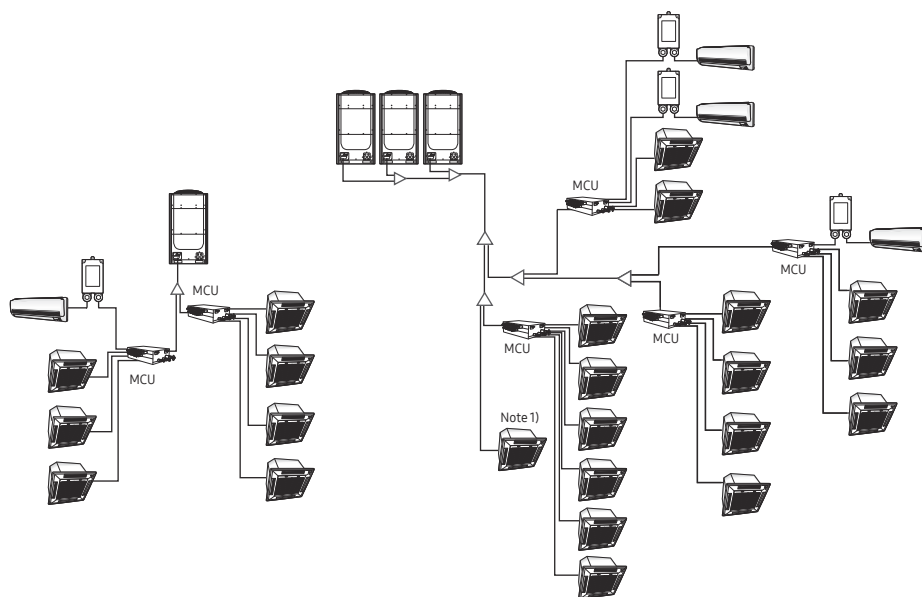


##### 2. Using distribution header



#### H/R

##### Using Y-joint



Note 1) Direct-connected indoor unit without MCU (for HR only)

- This indoor unit can only be used for cooling operation. (Heating operation is not possible.)
- Connect indoor unit to liquid and low pressure gas pipe.
- Change the installation option for direct-connected indoor unit without MCU. (refer to the indoor unit installation manual)

# 10. Installation

## Refrigerant pipe installation

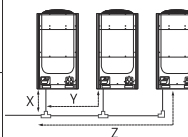
### Allowable length of the refrigerant pipe and the installation examples

H/P

Classification	Single Installation	Module installation
Installing only with Y-joint	<p>Outdoor unit</p> <p>Branch joint</p> <p>Indoor unit</p>	<p>Outdoor unit</p> <p>Branch joint</p> <p>Indoor unit</p>
Installing with Y-joint and distribution header	<p>Outdoor unit</p> <p>Branch joint</p> <p>Distribution header</p> <p>Indoor unit</p>	<p>Outdoor unit</p> <p>Distribution header</p> <p>Branch joint</p> <p>Indoor unit</p>
Installing only with distribution header	<p>Outdoor unit</p> <p>Distribution header</p> <p>Indoor unit</p>	<p>Outdoor unit</p> <p>Distribution header</p> <p>Indoor unit</p>

# 10. Installation

## Refrigerant pipe installation

Classification				Example		Remarks
Maximum allowable length of pipe	Outdoor unit ~ Indoor unit	Actual length (Equivalent length)	200m and below (220m and below)	Installing only with Y-joint	$a+b+c+d+e+f+g+p \leq 200\text{m}(220\text{m})$	Equivalent length Y-joint: 0.5 m, Distribution header: 1 m
				Installing with Y-joint and distribution header	$a+b+h \leq 200\text{m} (220\text{m}),$ $a+i+k \leq 200\text{m} (220\text{m})$	
				Installing only with distribution header	$a+i \leq 200\text{m} (220\text{m})$	
		Total length of pipe (m)	1,000 m or less	Installing only with Y-joint	$a+b+c+d+e+f+g+h+i+j+k+l+m+n+p \leq 1000\text{m}$	-
				Installing with Y-joint and distribution header	$a+b+c+d+e+f+g+h+i+j+k \leq 1000\text{m}$	-
				Installing only with distribution header	$a+b+c+d+e+f+g+h+i \leq 1000\text{m}$	-
	Outdoor unit ~ Outdoor unit (Module installation)	Pipe length	10 m or less	$x \leq 10\text{ m}, y \leq 10\text{ m}, z \leq 10\text{ m}$		
		Equivalent length	13 m or less	$x \leq 13\text{ m}, y \leq 13\text{ m}, z \leq 13\text{ m}$		
Maximum allowable height difference of pipe	Outdoor unit ~ Indoor unit	110/110m <small>Note 2)</small>		$H1 \leq 110/110\text{m}$		
	Indoor unit ~ Indoor unit	50m or less		$H2 \leq 50\text{m}$		
		But, when AM****NQDEH**** / AM****JNVDKH**** is installed, H2 is 15 m or less.				
Maximum allowable length after branch joint	First branch joint ~ Farthest Indoor unit	Pipe length	45 m or less	Installing only with Y-joint	$b+c+d+e+f+g+p \leq 45\text{ m}$	-
				Installing with Y-joint and distribution header	$i+k \leq 45\text{ m}$	
				Installing only with distribution header	$i \leq 45\text{ m}$	
		45 m~ 90 m <small>Note 1)</small>	Required conditions must be satisfied			

# 10. Installation

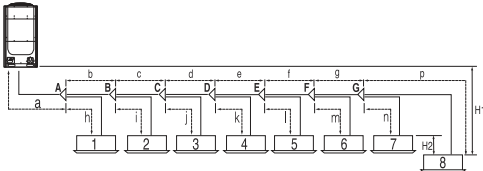
## Refrigerant pipe installation

### Electrical wiring work

EEV kit			Model name		Remarks
EEV kit ~ Indoor unit	Actual pipe length	2 m	MEV-E24SA	1 indoor	Apply to products without EEV (Wall mount & ceiling)
			MEV-E32SA		
		20 m or less	MXD-E24K132A	2 indoor	
			MXD-E24K200A		
			MXD-E32K200A		
			MXD-E24K232A	3 indoor	
			MXD-E24K300A		
			MXD-E32K224A		
			MXD-E32K300A		

※ Please refer to the EEV Kit manual.

Note 1) Required condition

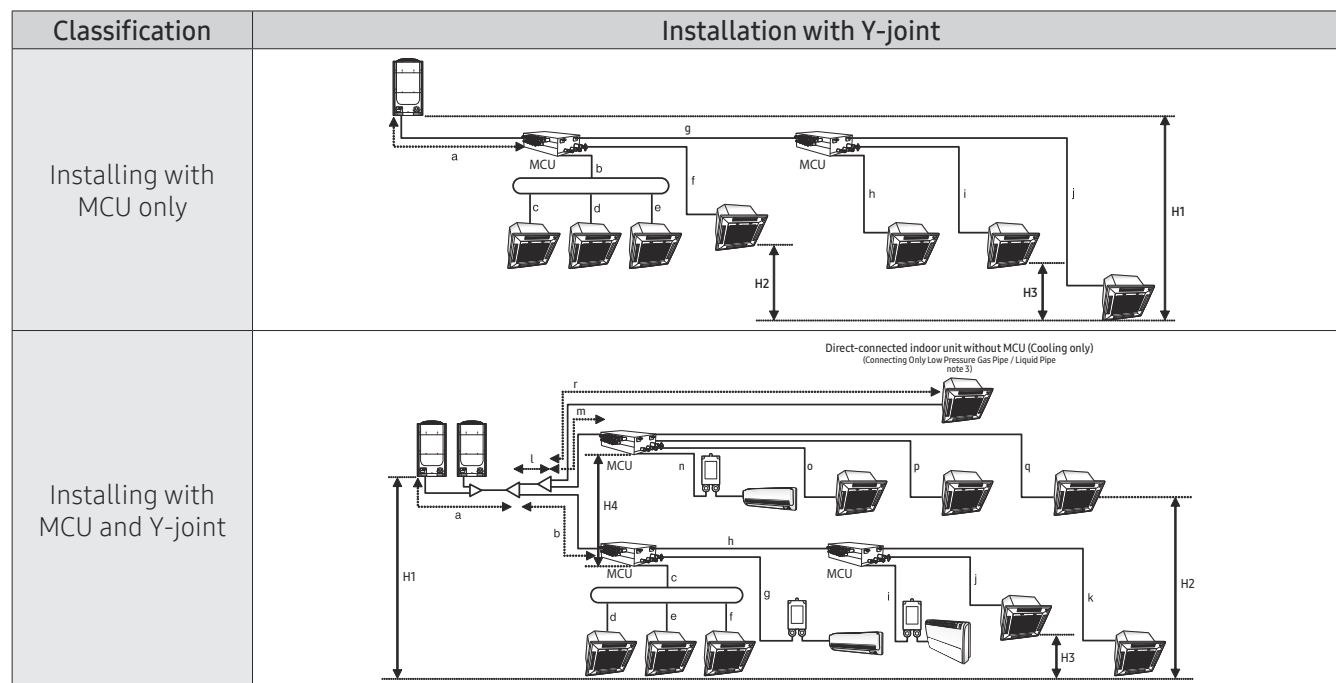
Classification	Condition	Example
First branch joint ~ Farthest Indoor unit	$45\text{m} \leq b+c+d+e+f+g+p \leq 90\text{m}$ : branch pipes (b, c, d, e, f, g) size must be increased by 1 grade	
Total length of extended pipe	If the size of pipe (main pipe), between the first branch joint and the outdoor unit, is not increased by 1 grade, $a+(b+c+d+e+f+g) \times 2 + h+i+j+k+l+m+n+p \leq 1000\text{ m}$	
	If the size of pipe (main pipe), between the first branch joint and the outdoor unit, is increased by 1 grade, $(a+b+c+d+e+f+g) \times 2 + h+i+j+k+l+m+n+p \leq 1000\text{ m}$	
Each Y-joint ~ Each indoor unit	$h, i, j, \dots p \leq 45\text{ m}$	
Difference between the distance of the outdoor unit to the farthest indoor unit and nearest indoor unit $\leq 45\text{m}$ , $(a+b+c+d+e+g+p)-(a+h) \leq 45\text{m}$		

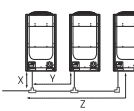
Note 2) When indoor unit is located at higher level than outdoor unit, allowable height difference is 110m, (If the height difference is over 40m, contact your local dealer for more information.)  
 but when the indoor unit is located at lower level than outdoor unit, allowable height difference is 110m  
 (If the height difference is over 50m, need to decide whether to install PDM kit or not.)  
 Model name of the PDM kit : MXD-A38K2A, MXD-A12K2A, MXD-A58K2A

# 10. Installation

## Refrigerant pipe installation

H/R



Classification				Example		Remarks
Maximum allowable pipe length	Outdoor unit ~ Indoor unit	Actual pipe length (Equivalent length)	200 m or less (220 m or less)	Installing only with MCU	$a+g+j \leq 200 \text{ m (220 m)}$	Equivalent length
				Installing with MCU and Y-joint	$a+b+h+k \leq 200 \text{ m (220 m)}$	Y-joint: 0.5 m Distribution header: 1 m MCU: 1 m
		Total length of pipe	1000 m or less	Installing only with MCU	$a+b+c+d+e+f+g+h+i+j \leq 1000 \text{ m}$	
				Installing with MCU and Y-joint	$a+b+c+\dots+r \leq 1000 \text{ m}$	
	Outdoor unit ~ Indoor unit	Pipe length	10 m or less	$x \leq 10 \text{ m}, y \leq 10 \text{ m}, z \leq 10 \text{ m}$		
		Equivalent length	13 m or less	$x \leq 13 \text{ m}, y \leq 13 \text{ m}, z \leq 13 \text{ m}$		
	MCU ~ Indoor unit	Pipe length	45 m or less	Installing only with MCU	$b+c \leq 45 \text{ m}, b+d \leq 45 \text{ m}, b+e \leq 45 \text{ m}, f \leq 45 \text{ m}, g+h \leq 45 \text{ m}, g+i \leq 45 \text{ m}, g+j \leq 45 \text{ m}$	
				Installing with MCU and Y-joint	$c+d, c+e, c+f, g, h+i, h+j, h+k, n, o, p, q, r \leq 45 \text{ m}$	

# 10. Installation

## Refrigerant pipe installation

Classification				Example		Remarks
Maximum allowable height difference	Outdoor unit ~ Indoor unit	Pipe length	110 m / 110 m <sup>Note 1)</sup>	H1 ≤ 110 m / 110 m		
	Indoor unit ~ Indoor unit		40 m or less	H2 ≤ 40 m		
			But, when AM***NQDEH* / AM***JNV* is installed, H2 is 15 m or less.			
			Indoor unit ~ Indoor unit (in one MCU)	15 m or less	H3 ≤ 15 m	
	MCU ~ MCU		30 m or less	H4 ≤ 30 m		
Maximum allowable length after branch joint	First branch joint ~ Farthest Indoor unit	Pipe length	45 m or less	Installing only with MCU	g+j ≤ 45 m	
				Installing with MCU and Y-joint	b+h+k ≤ 45 m l+m+q ≤ 45 m l+r ≤ 45 m	
			45 ~ 90 m <sup>Note 2)</sup>	Required conditions must be satisfied		

EEV kit			Model name		Remarks
EEV kit ~ Indoor unit	Actual pipe length	2 m	MEV-E24SA	1 indoor	Apply to products without EEV (Wall mount & ceiling)
			MEV-E32SA		
		20 m or less	MXD-E24K132A	2 indoor	
			MXD-E24K200A		
			MXD-E32K200A		
			MXD-E24K232A	3 indoor	
			MXD-E24K300A		
			MXD-E32K224A		
			MXD-E32K300A		

※ Please refer to the EEV Kit manual.

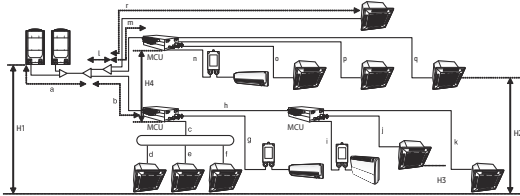
# 10. Installation

## Refrigerant pipe installation

Note 1) When indoor unit is located at higher level than outdoor unit, allowable height difference is 110m, (If the height difference is over 40m, contact your local dealer for more information.) but when the indoor unit is located at lower level than outdoor unit, allowable height difference is 110m (If the height difference is over 50m, need to decide whether to install PDM kit or not.)

Model name of the PDM kit : MXD-A38K2A, MXD-A12K2A, MXD-A58K2A

Note 2) Required condition

Classification	Condition	Example
First branch joint ~ Farthest Indoor unit	$45\text{ m} \leq b+h+k, l+m+q, l+r \leq 90\text{ m}$ : Size of the branch liquid and low pressure gas pipes (b, l, m) must be increased by 1 grade.	
Total length of extended pipe	If the size of pipe (main pipe), between the first branch joint and the outdoor unit, is not increased by 1 grade, $a+(b+l+m) \times 2+c+d+e+f+g+h+i+j+k+n+o+p+q+r \leq 1000\text{ m}$	
	If the size of pipe (main pipe), between the first branch joint and the outdoor unit, is increased by 1 grade, $(a+b+l+m) \times 2+c+d+e+f+g+h+i+j+k+n+o+p+q+r \leq 1000\text{ m}$	
MCU ~ Each indoor unit	$c+d, c+e, c+f, g, h+i, h+j, h+k, n, o, p, q, r \leq 45\text{ m}$	
Difference between the distance of the outdoor unit to the farthest indoor unit and nearest indoor unit $\leq 45$ $(a+b+h+k) - (a+b+c+d) \leq 45$		

Note 3) For indoor units to which no MCU is connected, be sure to set their options to “Cooling only indoor unit,” and then connect them to a low pressure gas pipe and a liquid pipe. Be sure to combine the cooling only indoor units so that their total capacity becomes 50% or less of the total capacity of all indoor units.

Note 4) In case of connecting more than one indoor unit in one MCU Port, the below indoor units can not be combined.  
ERV plus (AM\*\*\*FNKDE\*\*), OAP duct(AM\*\*\*JNEPE\*\*), Hydro Unit HE(AM\*\*\*FNBD\*\*), Hydro Unit HT(AM\*\*\*FNBF\*\*), AHU kit (MXD-K\*\*\*AN, MCM-D\*\*\*N)

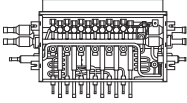
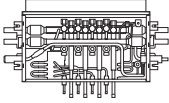
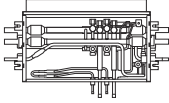
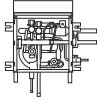
Note 5) In case of connecting two MCU ports with Y-joint, the indoor units can not be combined to more than one.


# 10. Installation

## Refrigerant pipe installation

### Installing the MCU

#### MCU specification

Model	MCU-S6NEK2N	MCU-S4NEK3N	MCU-S2NEK2N	MCU-S1NEK1N
Exterior of MCU				
Number of connectable indoor units at one port	Up to 8 units	Up to 8 units	Up to 8 units	Up to 8 units
The maximum capacity of the connectable indoor units at one port	16 kW	16 kW	16 kW	16 kW
The maximum capacity of the connectable indoor units	61.6 kW	61.6 kW	32.0 kW	16 kW
Internal EEV	Not included			



CAUTION

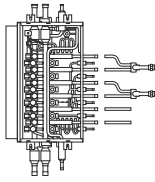
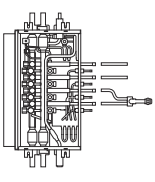
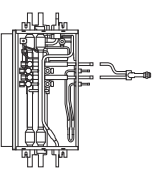
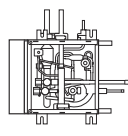
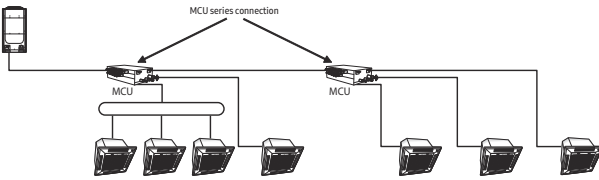




- Indoor units without internal EEV(AM\*\*\*NTDE\*, AM\*\*\*NADE\*) can not be connected directly to the MCU.
- Please connect these indoor units using EEV kit(MEV-E\*\*SA, MXD-E\*\*K\*\*A).



# 10. Installation

## Refrigerant pipe installation

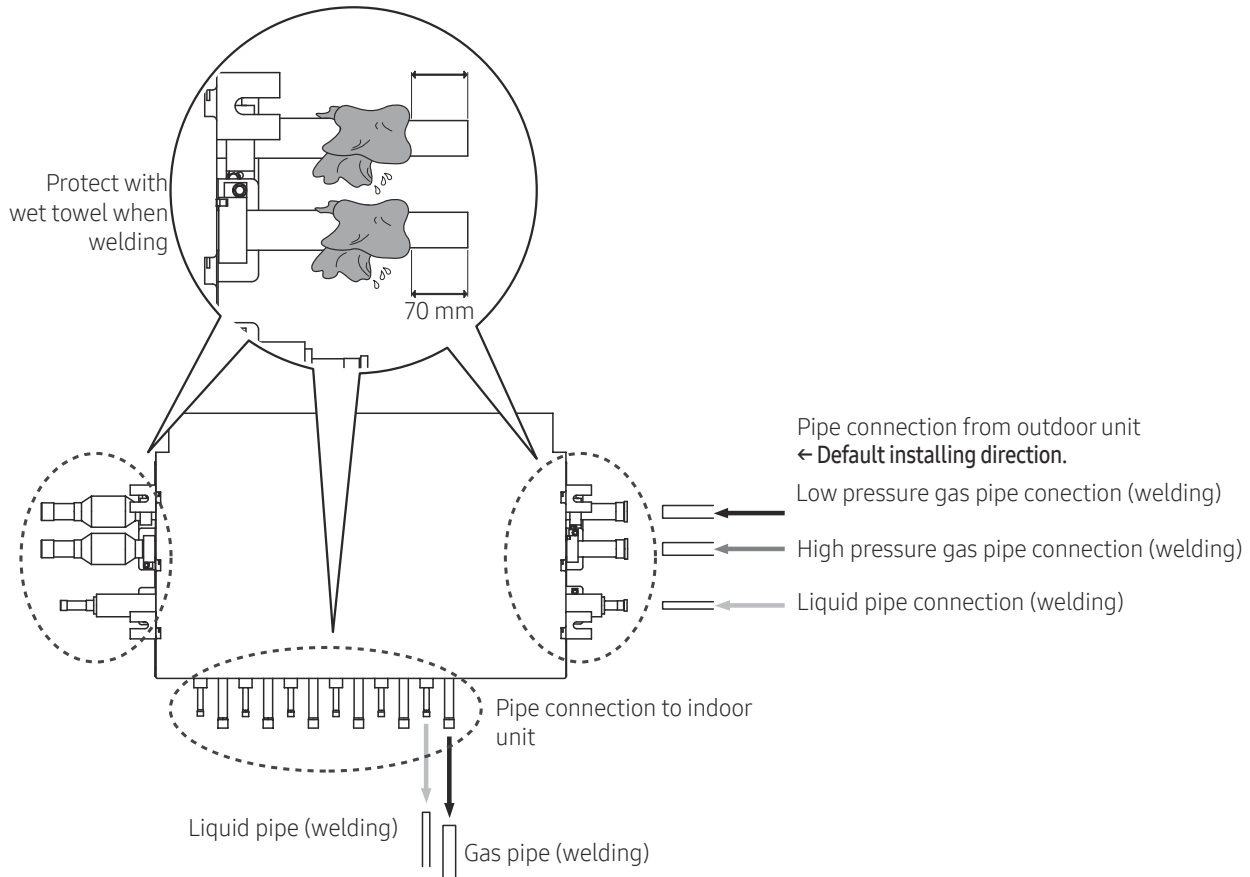
### Installing the indoor units

Model	MCU-S6NEK2N	MCU-S4NEK3N	MCU-S2NEK2N	MCU-S1NEK1N
Example installing (Each port connection)				
Example installing (MCU series connection)				
Installing indoor units	<p>Under 16.0 kW indoor unit : Don't use Y-connector            16.0 kW ~ 28.0 kW indoor unit : Use Y-connector at the Gas &amp; Liquid line            If you want to continuous cooling operation under -5 °C, set outdoor 'Expand operational temperature range for cooling operation (HR only)', and use Y-connector on 5.0 ~ 16 kW indoor unit</p> <p>In case of using Y-connector, it is only connectable for port combination at below            Connectable port combination for Y-connector : A + B port, C + D port, E + F port            Non-connectable port combination for Y-connector : B + C port, D + E port, non-continuous port</p> <p>Set Dip Switch option for using Y-connector</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>S/W Option</p>  <p>Default</p> </div> <div style="text-align: center;"> <p>S/W Option</p>  <p>Combination of A+B port</p> </div> <div style="text-align: center;"> <p>S/W Option</p>  <p>Combination of C+D port</p> </div> <div style="text-align: center;"> <p>S/W Option</p>  <p>Combination of E+F port</p> </div> </div> <p>In case of MCU connection in series, the maximum capacity of indoor units in MCU series connection is 61.6 kW</p>			<p>This unit is only connectable for one port under 16 Kw</p> <p>This unit is impossible to connect MCU to MCU in series.</p>

# 10. Installation

## Refrigerant pipe installation

### How to connect the pipes



- \* When installing MCU, use the pattern sheet for installation that is provided with the product.
- \* When welding the gas pipes, protect the product with the flame-proof sheet.
- \* When connecting the MCU with outdoor units, default direction is set in the MCU.  
If installing opposite direction, weld the enclosed copper cap in each high pressure, low pressure and liquid pipes.

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Ver.22

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