

Job Name _____
 Purchaser _____
 Submitted to _____
 Unit Designation _____

Location _____
 Engineer _____
 Reference Approval Construction
 Schedule # _____

System Specifications

System	Modules Connected	Module 1	AM120BXVGJH/AA
		Module 2	AM240BXVGJH/AA
Performance	US Ton (nominal)		30
	Capacity (Btu/h) ¹	Nominal / Rated Cooling	360,000 / 342,000
		Nominal / Rated Heating	405,000 / 386,000
	EER	Ducted / Mixed / Non-Ducted	10.40 / 10.45 / 10.50
	IEER	Ducted / Mixed / Non-Ducted	21.30 / 22.40 / 23.50
High Heat COP	Ducted / Mixed / Non-Ducted	3.40 / 3.46 / 3.52	
Power	Voltage	(@V/Hz)	3 / 460 / 60
	Maximum Circuit Breaker (MCCB/ELB/ELCB)		25 + 50
	Minimum Circuit Ampacity (MCA)		19.4 + 40.0
Indoor Units	Total Capacity (%)		50 - 184% Of outdoor unit capacity ²
	Maximum Indoor Unit Quantity		62
Refrigerant	R410A Factory Charge (lbs.)		51.8
Pipe Connections	Liquid X Suction (inches)		3/4 X 1 5/8
Refrigerant Pipe Limitations ³	Max. Length - ODU to Farthest IDU (feet)		656 (722 equivalent)
	Max. Vertical Separation	ODU to IDU (feet) ⁴	361
		Highest/Lowest IDU (feet)	164
	Max. Total Refrigerant Pipe Length (feet)		3,280
Sound Level	dB (A)	Max.	67
Operating Temperatures	Cooling ⁵	°F (°C)	5 -122 (-15 - 50)
	Heating	°F (°C)	-22 - 75 (-30 - 24)
Safety Certifications			ETL & ETLc
Protection Devices	Intelligent logic to ensure proper operation within unit design limitations and operational parameters. High pressure sensor, low pressure sensor, over-voltage protection, compressor over-current protection, current transformer, fan motor voltage protection, fan motor thermal protection, overheat protection, phase detection protection, high voltage fuses		



Compatibility

DVM S indoor units (AM****N****/AA, ACL-***NN), AHU Kits (MXD-K***AN), Universal Communication Kits (MCM-D211UN), and Hydro Units (AM****NB***/AA).

Construction

The units shall be galvanized steel with a baked on powder coated finish.

Refrigerant System

The compressors shall be hermetically sealed, inverter driven, direct flash injected, DC scroll type with soft-start capability manufactured by Samsung. The compressor(s) shall feature an asymmetrical scroll design with rotating compressor operation/priority (where applicable). Flash injected compressors provide advanced low ambient heating performance.

The system shall have subcooling devices to maintain capacity at extreme system refrigerant pipe lengths and to minimize refrigerant noise.

The system shall allow a reduction of the main liquid refrigerant pipe (outdoor unit to first unit or Y-joint) by one diameter reducing total system refrigerant volume and pipe and insulation costs if line lengths and vertical separation are within the reduced pipe diameter guidelines. Refer to supporting documents for complete guideline details.

Heat Exchanger

The heat exchanger shall be mechanically bonded fin to copper tube. The aluminum fins of the heat exchanger shall have a protective coating.

Salt spray test method: ASTM-B117-18 - The heat exchanger showed no unusual rust or corrosion development to 3,000 hours.

The heat exchanger shall consist of two separate circuits to enhance the heat pump defrost cycle. The unit shall use the entire coil initially for the defrost cycle. To resume heating faster in extreme conditions, the upper section shall return to heating operation while the lower section continues to defrost.

Active Artificial Intelligence

The outdoor units shall feature Active Artificial Intelligence (AI) shall monitor environmental and system operational data and use Deep Neural Network algorithms to provide optimal system performance and reliability.

Active Artificial Intelligence (AI) shall be used to optimize high pressure control, low pressure control, defrost cycle activation and operation, and low refrigerant detection.

The outdoor unit shall use Active Artificial Intelligence (AI) to monitor system refrigerant volume in real-time while in cooling mode to detect possible leaks or low refrigerant charge and provide an error code before system shutdown (conditions apply).

Controls

The outdoor units shall have a removable EEPROM that stores unit serial number, startup information, system settings, system tag/name, and other information.

Control wiring shall be 16 AWG X 2 shielded wire.

Other Features

Inverter PCB cooling shall be done with liquid refrigerant and air to maintain optimal and safe operating temperatures.

The system shall feature advanced oil recovery cycle logic (maximum duration in cool mode: 3 minutes, maximum duration in heat mode: 6 minutes, defrost cycles lasting over 3 minutes are considered oil recovery cycles). Oil recovery operation shall not interrupt heating or cooling operation.

The outdoor units shall feature optional night quiet modes to reduce outdoor unit sound (4 levels) with automatic activation or manual activation (with MIM-B14 accessory).

The outdoor unit shall feature advanced intelligent defrost logic to significantly reduce defrost cycle frequency by monitoring air resistance across the condenser coil during heating operation to determine defrost operation initiation to prevent unnecessary defrost cycles.

The outdoor units shall feature optional snow blowing logic to prevent snow accumulation on idle outdoor units

The outdoor unit shall feature maximum current control settings to limit current (50% - 100% of design current) adjustable at outdoor unit, supported central controls, and supported indoor unit wired controllers.

The outdoor unit shall feature energy savings options to reduce system energy consumption when average indoor room temperatures are greater than average indoor set temperatures in heating mode or when average indoor room temperatures are lower than average indoor set temperatures in cooling mode.

Accessories

Qty.	Model Number	Description
1	MXJ-TA3819M	Outdoor unit tee (liquid and suction fittings, ≤ 461,000 Btu/h)
	WHG-T2-B	Top wind/hail guard (8 - 14 ton outdoor units)
	WHG-T3-B	Top wind/hail guard (16 - 20 ton outdoor units)
	WHG-SL-B	Left side wind/hail guard
	WHG-SR-B	Right side wind/hail guard
	WHG-R1-B	Rear wind/hail guard for 6, 16 - 20 ton units (2 required for 16 - 20 ton units)
	WHG-R2-B	Rear wind/hail guard for 8 - 14 ton units
	WHG-F1-B	Front wind/hail guard for 8 - 14 ton outdoor units
	LACH-2-KIT-B	Low ambient cooling hood and side guards (medium chassis, 1 required)
	LACH-3-KIT-B	Low ambient cooling hood and side guards (large chassis, 1 required)
	LACH-2-SIDE KIT-B	Low ambient cooling side guards (medium chassis, 1 required)
	LACH-3-SIDE KIT-B	Low ambient cooling side guards (large chassis, 1 required)
	MCM-C200	Heat pump mode selector switch
	BPHK-460V-2	Base pan heater kit (base pan pan heater and control box, 1 required)
	BPHK-460V-3	Base pan heater kit (base pan pan heater and control box, 1 required)
	MIM-B14	External contact control interface module for operation and error output and night silent mode manual activation (1 required)

¹ Certified in accordance with the AHRI Variable Refrigerant Flow Multi-Split Air-Conditioners and Heat Pump (VRF) Certification Program which is based on the latest edition of AHRI Standard 1230.

² Restrictions apply. Refer to DVM S2 technical data books for full details.

³ Other pipe restrictions and requirements exist. Please consult technical data book or installation manuals for full details regarding limitations and other requirements.

⁴ When the outdoor unit is lower than indoor units, and vertical separation is greater than 131 feet, additional conditions apply. When the outdoor unit is higher than the indoor units, and vertical separation is greater than 163 feet, additional conditions apply. Please refer to supporting documents at www.SamsungHVAC.com.

⁵ When operating in cooling mode between -13°F (-25°C) and 5°F (-15°C) OA, a low ambient cooling kit (LACH-*KIT-B) is required. When operating in cooling mode between 5°F (-15°C) and 23°F (-5°C) OA, a low ambient cooling side kit (LACH-*SIDE KIT-B) is required. Refer to technical bulletin at www.samsunghvac.com for full details and requirements.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice.



Module Specifications

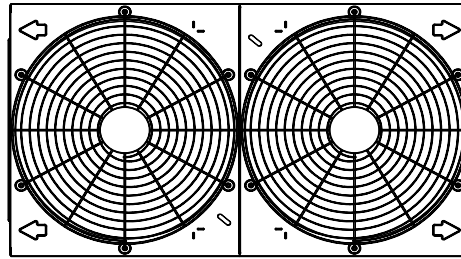
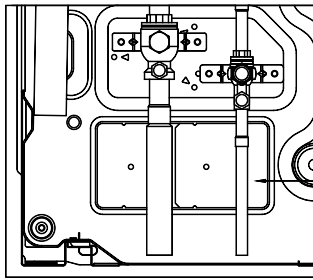
Module Model Number			AM120BXVGJH/AA	AM240BXVGJH/AA
Performance	US Ton (nominal)		10	20
	Capacity (Btu/h) ¹	Nominal	120,000	240,000
		Nominal	135,000	270,000
Power ²	Voltage	(ø/V/Hz)	3 / 460 / 60	3 / 460 / 60
	Maximum Circuit Breaker (MCCB/ELB/ELCB)		25	50
	Minimum Circuit Ampacity (MCA)		19.4	40.0
	SCCR	kA	5	5
Compressor	Type X Qty.		Inverter Scroll X 2	Inverter Scroll X 2
	RLA	A	6.6	15.6
	Compressor Modulation Range		5 - 100%	6 - 100%
Refrigerant	R410A Factory Charge	lbs.	17.6	34.2
Pipe Connections	Liquid X Suction	Inches	1/2 X 1 1/8	5/8 X 1 3/8
Condenser Fan	Fan	Type X Qty.	Propeller X 2	Propeller X 2
		Output (CFM)	9,924	13,773
	Motor	Type	DC	DC
		Output (W)	620 X 2	630 X 2
		FLA (A)	2.1 (each)	2.3 (each)
	Max. External Static Pressure	In. WC	0.43	0.31
Dimensions	W X H X D	Inches	51 X 66 3/4 X 30 1/8	73 1/4 X 66 3/4 X 30 1/8
	Weight	lbs.	571.0	853.2
	Shipping Weight	lbs.	608.5	910.9
Sound Level	dB (A)	Max.	57	66

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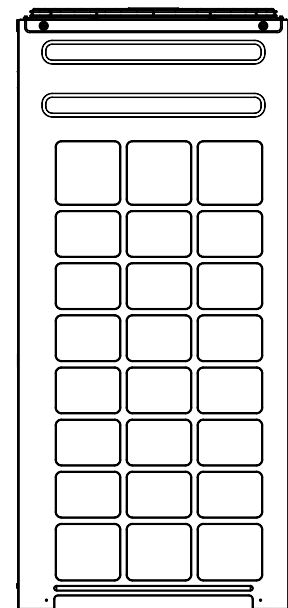
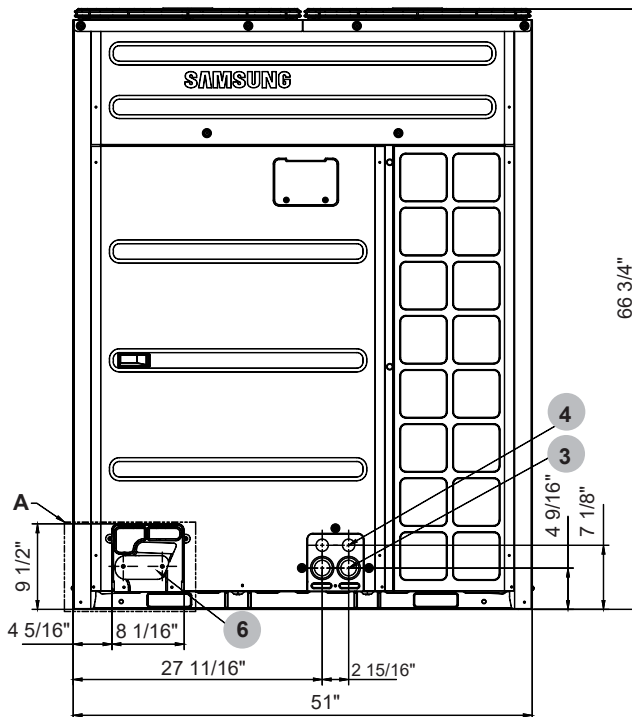
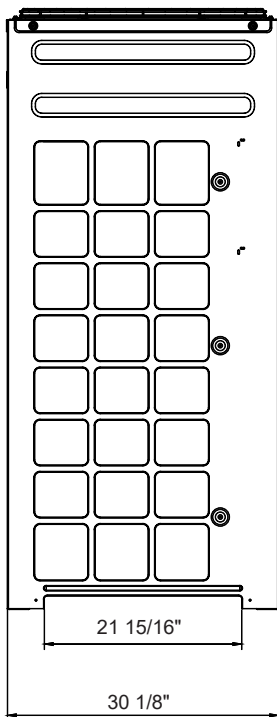
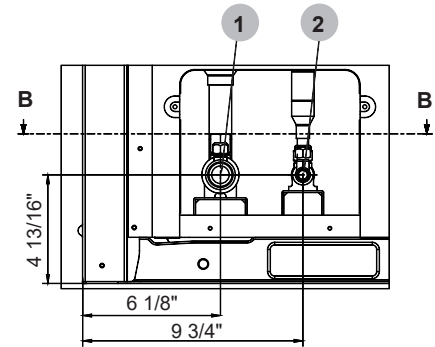
² Each condensing unit requires a separate electrical connection with overcurrent protection.

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Section B-B



Detail A

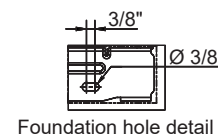
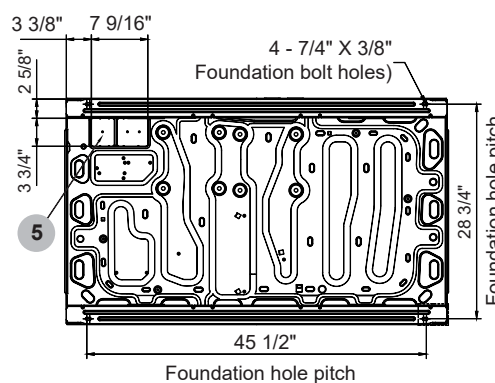


Notes

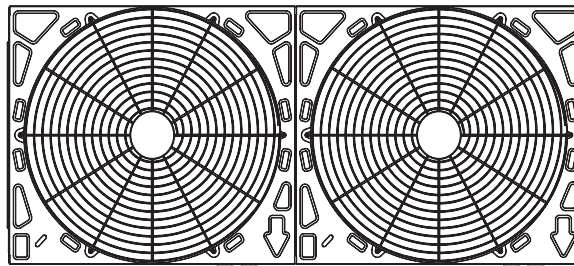
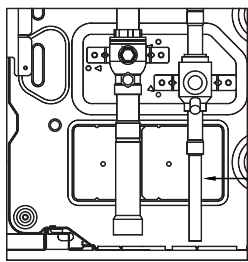
1. Detail A and SECTION B-B indicate the dimensions after connecting piping
2. View C indicates knockout hole dimensions (bottom)

No.	Description	Remark
1	Gas refrigerant pipe	1 1/8"
2	Liquid refrigerant pipe	1/2"
3	Power conduit knockout	1 3/4"
4	Communication wire knockout	1 3/8"
5	Knockout for refrigerant piping	Bottom
6	Knockout for refrigerant piping	Front

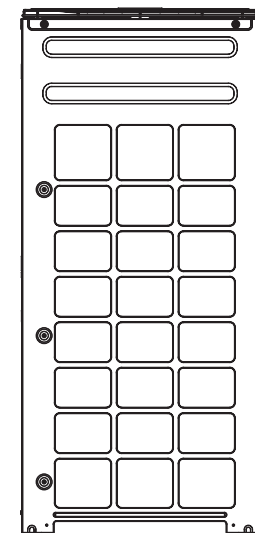
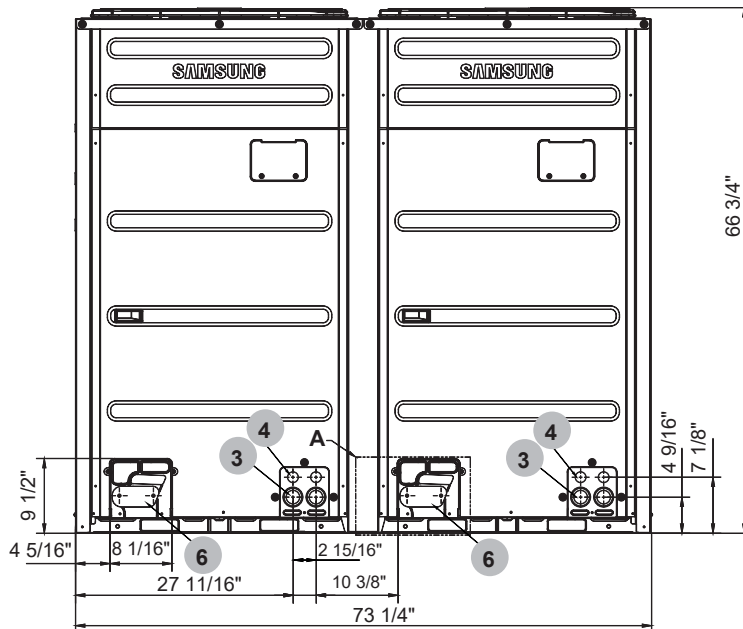
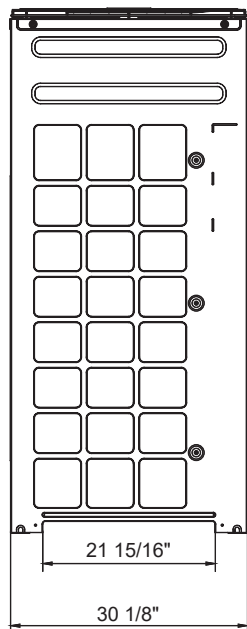
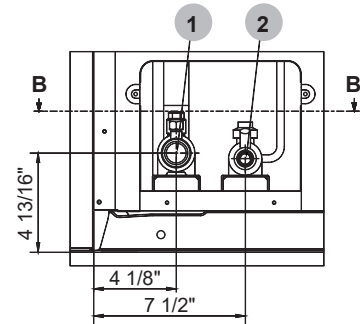
View C



Section B-B



Detail A



Notes

1. Detail A and SECTION B-B indicate the dimensions after connecting piping
2. View C indicates knockout hole dimensions (bottom)

No.	Description	Remark
1	Gas refrigerant pipe	1 3/8"
2	Liquid refrigerant pipe	5/8"
3	Power conduit knockout	1 3/4"
4	Communication wire knockout	1 3/8"
5	Knockout for refrigerant piping	Bottom
6	Knockout for refrigerant piping	Front

View C

