

Samsung DVM S Series, Heat Pump Condensing Unit

Job Name _____
 Purchaser _____
 Submitted to _____
 Unit Designation _____

Location _____
 Engineer _____
 Reference ☐ Approval ☐ Construction ☐
 Schedule # _____

System Specifications

System	Modules Connected	Module 1	AM072FXVAFH/AA
		Module 2	AM168HXVAFH/AA
Performance	US Ton (nominal)		20
	Capacity (Btu/h)	Nominal / Rated Cooling ¹	240,000 / 228,000
		Nominal / Rated Heating ²	270,000 / 258,000
	System Modulation Down to (Btu/h)		7,513
	EER	Ducted / Non-Ducted	10.6 / 10.6
	IEER	Ducted / Non-Ducted	20.1 / 22.0
Power	Voltage	(ø)V/Hz	3 / 208-230 / 60
Indoor Units	Total Capacity (%)		50 - 130% Of Outdoor Unit Capacity
	Maximum Indoor Unit Quantity		41
Refrigerant	R410A Factory Charge (lbs.)		36.38
Pipe Connections	Liquid X Suction (inches)		5/8 X 1 1/8
Installation Limitation ³	Max. Distance - ODU to IDU (feet)		656 (722 equivalent)
	Vertical Separation (feet)	ODU to IDU	361 (ODU above) / 131 (ODU below)
		Highest/Lowest IDU	164
	Total Refrigerant Pipe (feet)		3,280
Operating Temperatures	Cooling	°F	23 - 120
	Heating	°F	-13 - 75
System Sound Level	dB (A)	Max.	65
Required Accessories	Outdoor Module Connection Kit		1 X MXJ-TA3819M
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		
	Inverter PCB cooling done with liquid refrigerant to maintain optimal and safe operating temperatures		



Compatibility

Only compatible with Samsung DVM S indoor units (AM****N*DCH**)

Construction

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

Heat Exchanger

The heat exchanger shall be mechanically bonded fin to copper tube.

Controls

The unit shall be operated via NASA Protocol with controls provided by Samsung

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

Controls shall integrate with a BMS system without additional interface modules

Control wiring shall be 16 AWG X 2 shielded wire.

Refrigerant System

The compressors shall be Samsung hermetically sealed, inverter driven, direct vapor injected, DC scroll type with soft-start capability.

Vapor injected compressors provide improved performance in cooling and heating modes.

Refrigerant flow shall be controlled by EEV (electronic expansion valve) throughout the system.

Subcooling devices in system maintain capacity at extreme system refrigerant pipe lengths and minimize refrigerant noise.

Other Features

Asymmetrical scroll design with rotating compressor operation/priority (where applicable).

Optional night quiet modes to reduce outdoor unit sound (4 levels)

Optional snow blowing logic to prevent snow accumulation on idle outdoor units

Continuous operation while outdoor unit(s) change between heating and cooling modes (conditions apply).

Maximum current control of outdoor unit(s) to limit current (50% - 100% of design current) adjustable at outdoor unit or central control devices: DMS 2 (MIM-D00AN), BACnet Gateway (MIM-B17N), LON Gateway (MIM-B18N).

Energy savings options to reduce system energy consumption in heating mode when average indoor room temperatures are greater than average indoor set temperatures.

Accessories

Qty.	Model Number	Description
1	MXJ-TA3819M	Outdoor module connection kit - liquid and suction
	WHG-SL	Left wind/hail guard (1)
	WHG-SR	Right wind/hail guard (1)
	WHG-R1	Rear wind/hail guard for 6 ton outdoor unit (1)
	WHG-R2	Rear wind/hail guard for 8 - 16 ton outdoor unit (1)
	WHG-T1	Top wind/hail guard for 6 ton outdoor unit (1)
	WHG-T2	Top wind/hail guard for 8 - 16 ton outdoor unit (1)
	MCM-C200	Mode selector switch for heat pump systems

¹ Nominal cooling capacities are based on: Indoor temperature: 80 °F DB, 67°F WB. Outdoor temperature: 95 °F DB, 75°F WB.

² Nominal heating capacities are based on: Indoor temperature: 70 °F DB, 60°F WB. Outdoor temperature: 47 °F DB, 43°F WB.

³ Other pipe restrictions and requirements exist. Please consult technical data book or installation manuals for full details regarding limitations and other requirements for vertical separation over 163 feet (outdoor to lowest indoor).

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

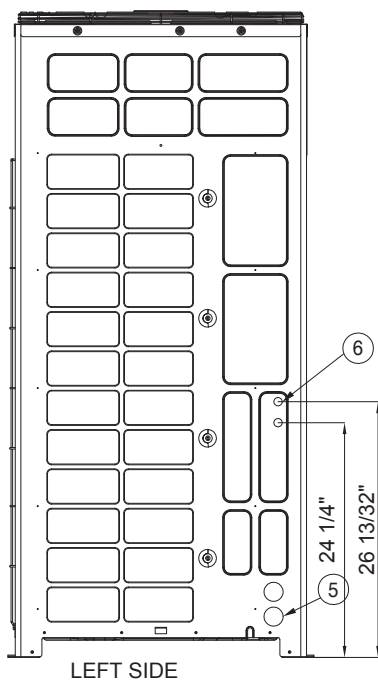
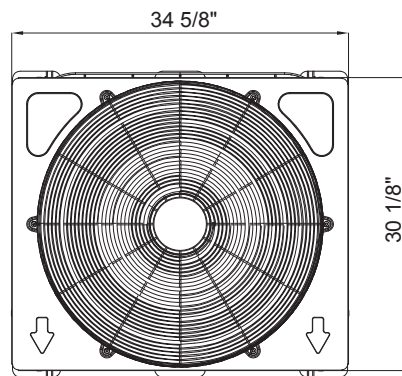
System Specifications

Module Model Number			AM072FXVAFH/AA	AM168HXVAFH/AA
Performance	US Ton (nominal)		6	14
	Capacity (Btu/h)	Nominal / Rated Cooling ¹	72,000 / 69,000	168,000 / 160,000
		Nominal / Rated Heating ²	81,000 / 77,000	189,000 / 180,000
	System Modulation Down to	Btu/h	7,513	7,513
Power	Voltage	(ø/V/Hz)	3 / 208-230 / 60	3 / 208-230 / 60
	Maximum Circuit Breaker (MCCB/ELB/ELCB)		35	80
	Minimum Circuit Ampacity (MCA)		28.0	66.0
	SCCR	kA	5	5
Compressor	Type		SSC Scroll X 1	SSC Scroll X 2
	RLA	A	14.3	24.0
Refrigerant	R410A Factory Charge	lbs.	12.13	24.25
Pipe Connections	Liquid X Suction	inches	3/8 X 3/4	5/8 X 1 1/8
Condenser Fan	Fan	Type	Propeller X 1	Propeller X 2
		Output (CFM)	7,240	10,948
	Motor	Type	DC	DC
		Output (W)	630 X 1	620 X 2
		FLA (A)	4.0	3.0
	Max. External Static Pressure	"WC	0.31	0.31
Dimensions	W X H X D	Inches	34 5/8 X 66 3/4 x 30 1/8	51 X 66 3/4 X 30 1/8
	Weight	lbs.	425.5	716.5
Sound Level	dB (A)	Max.	60	63
Safety Certifications			ETL & ETLc	

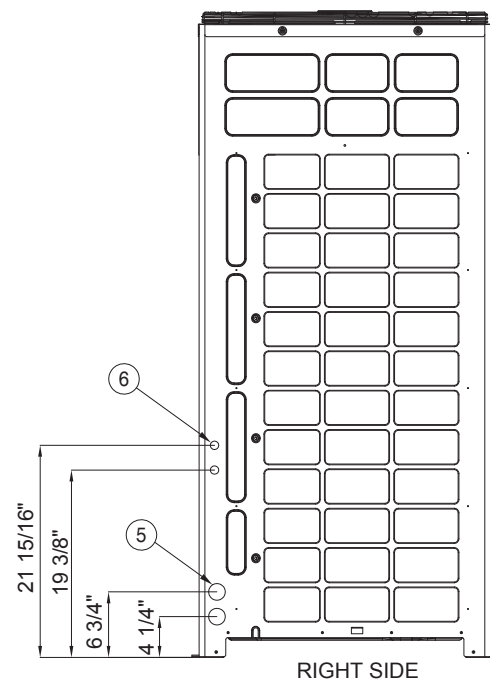
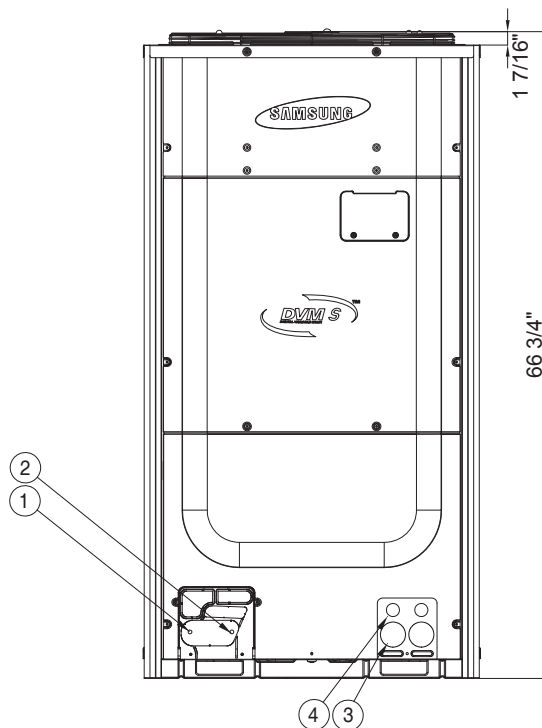
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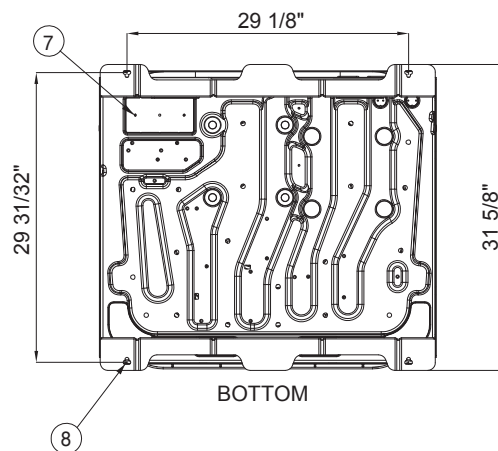
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LEFT SIDE

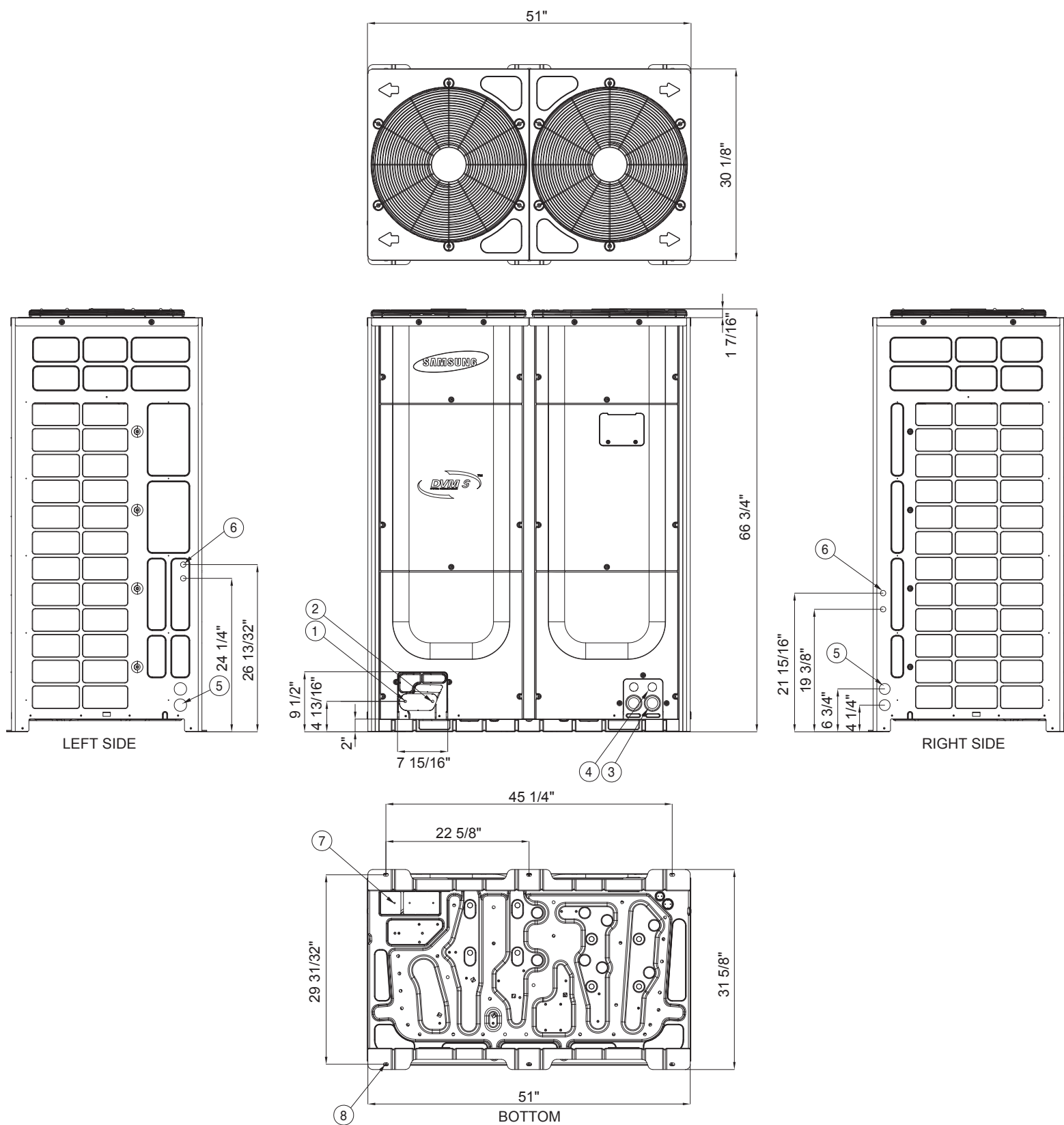


RIGHT SIDE



BOTTOM

- | | |
|---|--|
| ① Gas refrigerant pipe opening | ⑤ Power conduit opening (4 X Ø1 3/4") |
| ② Liquid refrigerant pipe opening | ⑥ Communication conduit opening (8 X Ø7/8") |
| ③ Power conduit opening (2 X Ø1 3/4") | ⑦ Knock-out opening for refrigerant piping (7" X 3") |
| ④ Communication conduit opening (2 X Ø1 3/8") | ⑧ Anchor bolt hole (4 X Ø15/32") |



- | | |
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