SAMSUNG

SUBMITTAL AM120FXVAJH2AA

Samsung DVM S Series, Heat Pump Condensing Unit

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation _____ Schedule # _____

System Specifications

Performance	US Ton (nominal)		10
	Capacity (Btu/h)	Nominal / Rated Cooling[1]	120,000 / 114,000
		Nominal / Rated Heating[1]	135,000 / 129,000
	Compressor Modulation Down to (Btu/h)		7,513
	EER	Ducted / Non-Ducted	11.20 / 11.40
	IEER	Ducted / Non-Ducted	22.40 / 29.30
	High Heat COP	Ducted / Non-Ducted	3.38 / 3.48
Power	Voltage	(ø/V/Hz)	3 / 460 / 60
	Maximum Circuit Breaker (MCCB/ELB/ELCB)		30
	Minimum Circuit Ampacity (MCA)		21.7
	SCCR	kA	5
Indoor Units	Total Capacity (%)		50 - 184% Of Outdoor Unit Capacity*
	Maximum Indoor Unit Quantity		20
Compressor	Type		SSC Scroll X 1
	RLA (A)		14
Refrigerant	R410A Factory Charge (lbs.)		16.31
Pipe Connections	Liquid X Suction (inches)		1/2 X 1 1/8
Installation Limitation[2]	Max. Distance - ODU to IDU (feet)		656 (722 equivalent)
	Vertical Separation (feet)	ODU to IDU [3]	361
		Highest/Lowest IDU	164
	Total Refrigerant Pipe (feet)		3,280
Condenser Fan	Fan	Type	Propeller X 2
		Output (CFM)	9,182
	Motor	Type	DC
		Output (W)	620 X 2
		FLA (A)	1.5
	Max. External Static Pressure ("WC)		0.31
Dimensions	W X H X D	Inches	51 X 66 3/4 X 30 1/8
	Weight	lbs.	535.3
	Shipping Weight	lbs.	577.2
Sound Level	dB (A)	Max.	61
Operating Temperatures	Cooling	°F	23 - 120 (-13 - 120 with LACH guards[4])
	Heating	°F	-13 - 75
Safety Certifications			ETL (UL 1995)
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.		

Accessories

Qty.	Model Number	Description
	WHG-T2	Top wind/hail guard (8 - 18 ton outdoor units)
	WHG-SL	Left side wind/hail guard (6 - 16 ton outdoor units)
	WHG-SR	Right side wind/hail guard (6 - 16 ton outdoor units)
	WHG-R2	Rear wind/hail guard (8 - 16 ton outdoor units)
	LACH-2-KIT	Low ambient cooling hood and side guards (Large Chassis, 1 required)
	LACH-2-SIDE KIT	Low ambient cooling side guards (8 - 16 ton outdoor units)
	MCM-C200U	Heat pump mode selector switch
	MIM-B14	External contact control interface module (operation and error output, night silent mode manual activation)

[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] 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).

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

[4] When operating in cooling mode between -13°F and 5°F OA, LACH-2-KIT is required. When operating in cooling mode between 5°F and 23°F OA, LACH-2-SIDE KIT is required. Refer to technical bulletin at www.samsunghvac.com for full details and requirements.

Compatibility
DVM S indoor units (AM****N**CH**), AHU kits (MXD-K***AN), and UCK (MCM-D211UN).

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.

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 2,280 hours.

Controls
The outdoor unit 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.

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

Flash injected compressors provide advanced low ambient heating performance.

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).

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.

Optional night quiet modes to reduce outdoor unit sound (4 levels) with automatic activation or manual activation (with MIM-B14).

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.

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

Maximum current control of outdoor unit(s) to limit current (50% - 100% of design current) adjustable at outdoor unit or central control devices: DMS 2.5 (MIM-D01AUN), BACnet Gateway (MIM-B17BUN), LON Gateway (MIM-B18BUN).

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.

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

** Restrictions apply. Design above 130% requires an engineering review for approval. Refer to the Technical Data Book for more information.*

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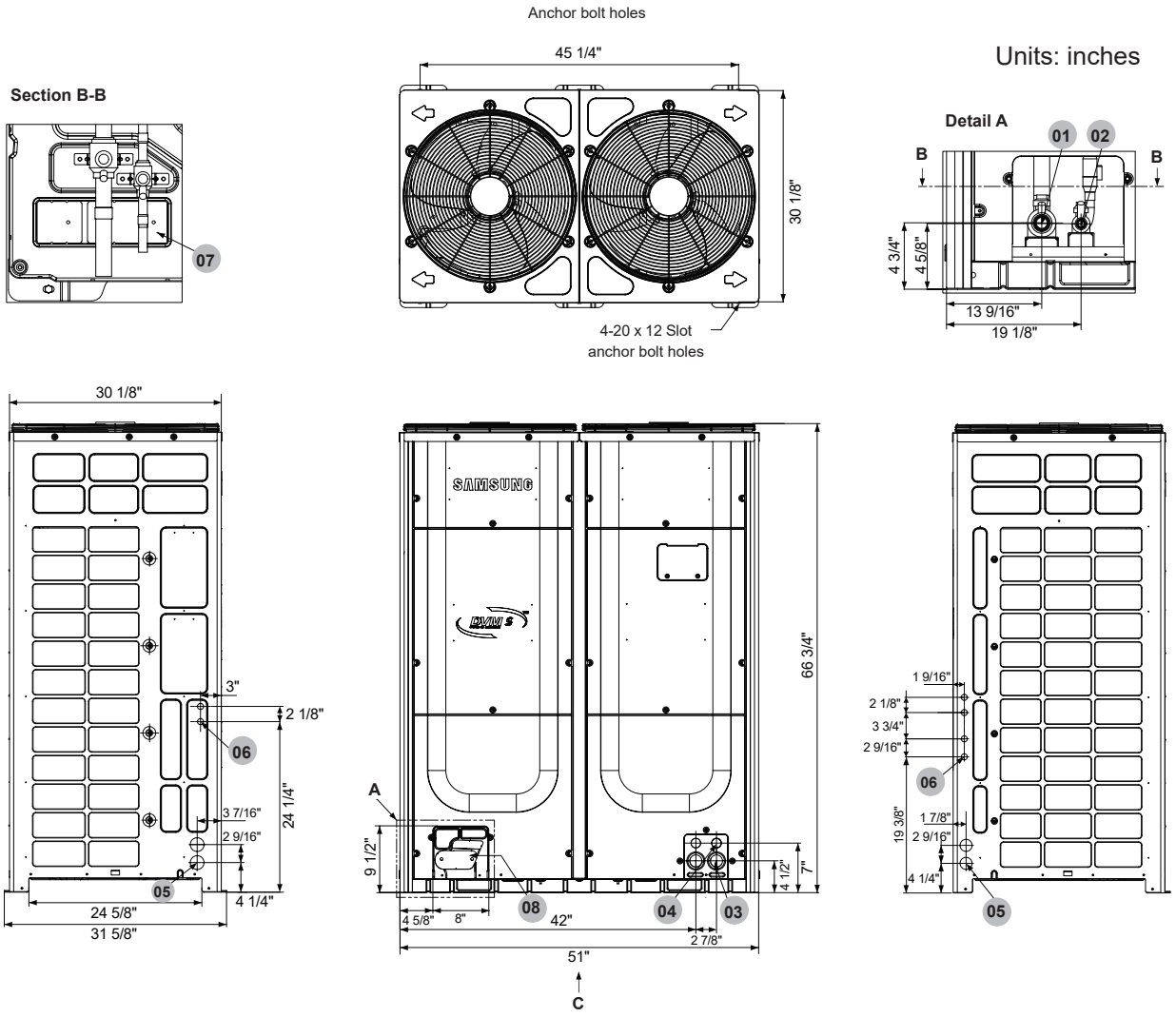
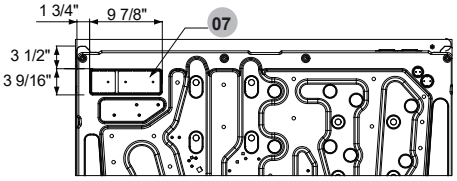
Samsung DVM S Series, Heat Pump Condensing Unit

AM120FXVAJH2AA Dimensional Drawing

Units: inches





Notes

1. Detail A and Section B-B indicate the location of refrigerant pipe connections
2. Items 3 through 8 knockout holes
3. View C indicates the dimension of knock-out hole (bottom)

No.	Description	Remark	No.	Description	Remark
1	Gas refrigerant pipe	See page 1	5	Power wire conduit knockout	Ø 1 23/32"
2	Liquid refrigerant pipe	See page 1	6	Communication wire conduit knockout	Ø 7/8"
3	Power wire conduit knockout	Ø 1 23/32"	7	Knockout hole for refrigerant pipes (bottom)	
4	Communication wire conduit knockout	Ø 1 5/16"	8	Knockout hole for refrigerant pipes (front)	