SAMSUNG

SUBMITTAL AM048NXMDCR/AA

Samsung DVM S Eco Series, Heat Recovery Condensing Unit

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation _____ Schedule # _____

System Specifications

Performance	US Ton (nominal)		4
	Capacity (Btu/h)	Nominal Cooling[1]	48,000
		Nominal Heating[1]	54,000
	System Modulation down to (Btu/h)		5,700
	SEER	Ducted / Non-Ducted	17.2 / 21.0
	EER	Ducted / Non-Ducted	10.2 / 11.5
	HSPF	Ducted / Non-Ducted	10.4 / 10.7
Power	Voltage	(ø/V/Hz)	1 / 208-230 / 60
	Maximum Circuit Breaker (MCCB/ELB/ELCB)		50
	Minimum Circuit Ampacity (MCA)		29
Indoor Units	Total Capacity (%)		50 - 130% Of Outdoor Capacity
	Maximum Indoor Unit Quantity		8
Compressor	Type		Twin BLDC Rotary X 1
	RLA	A	22.1
Refrigerant	Type		R410A
	Factory Charge	lbs.	7.1
Pipe Connections	Liquid X Suction X HP Gas (braze)		3/8 X 3/4 X 5/8
Installation Limitation[2]	Max. Distance - ODU to IDU (feet)		492 (574 equivalent)
	Vertical Separation (feet)	ODU to IDU [3]	164 / 131
		Highest/Lowest IDU	49
	Total Refrigerant Pipe (feet)		984
Condenser Fan	Fan	Type	Propeller X 2
		Output (CFM)	3,885
	Motor	Type	BLDC
		Output (W) / FLA (A)	125 X 2 / 0.6
Dimensions	W X H X D	Inches	37 X 47 5/8 X 13
	Weight	lbs.	213.8
Sound Level	dB (A)	Max. (cooling / heating)	51 / 53
Operating Temperature Range	Cooling [4]	°F	0°F ~ 118°F (-18°C ~ 48°C)
	Heating	°F	-13°F ~ 75°F (-25°C ~ 24°C)
Accessories	Wind Baffles	Front	☐ WBF-1M2
		Back	☐ WBB-2M
	Wi-Fi Adapter		☐ MIM-H04UN
	Base Pan Heater Kit		☐ MHC-015EE
	External contact control interface module (operation and error output, night silent mode manual activation)		☐ MIM-B14
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, high voltage fuses		

[1] Certified in accordance with the AHRI Unitary Small Air-Source Heat Pumps (USHP) Certification Program which is based on the latest edition of AHRI Standard 210/240.

[2] Other pipe restrictions and requirements exist. Please consult installation manuals or technical data book for full details.

[3] Vertical separation: 131' when outdoor unit is lower than the indoor units, 164' when the outdoor unit is higher than the indoor units.

[4] When cooling in outside temperatures between 0°F ~ 23°F, wind baffles are required. When outside temperature is between 0°F ~ 23°F, 50% operating capacity should be maintained to ensure reliability while in cooling mode.

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

Compatibility

Only compatible with Samsung DVM S indoor units (AM****N***H***) that are equal to or less than 48,000 Btu/h and MCM-D211UN Universal Communication Kit.

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 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, system tag/name, and other information.

Control wiring shall be 16 AWG X 2 shielded wire.

Refrigerant System

The compressor shall be Samsung hermetically sealed, inverter driven, twin BLDC Rotary type.

The condenser shall be able to provide simultaneous heating and cooling operation.

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

A flat plate subcooler device will improve capacity at extreme system refrigerant pipe lengths and reduce refrigerant noise.

Installation of an HR Changer (MCU-R4NEK0N) is mandatory. If additional Mode Control Unit(s) are needed, the HR Changer must be installed between the outdoor unit and addtional MCU's. Please refer to the installation manual for compatible MCU models.

Indoor units that will be used for cooling only year-round may be piped direct to the liquid and suction pipes after the HR Changer and bypassing MCU connection.

Other Features

Advanced oil recovery cycle logic to ensure adequate oil level is maintained in the compressor. 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).

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 (MIM-D00AN), DMS 2.5 (MIM-D01AUN), BACnet Gateway (MIM-B17N, MIM-B17BUN), LON Gateway (MIM-B18N, MIM-B18BUN).

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

Intertek

AHRI CERTIFIED™ www.ahridirectory.org Unitary Small AC AHRI Standard 210/240 Certification applies only when the complete system is listed with AHRI.

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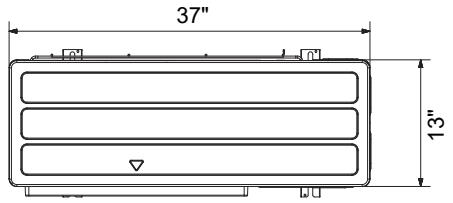
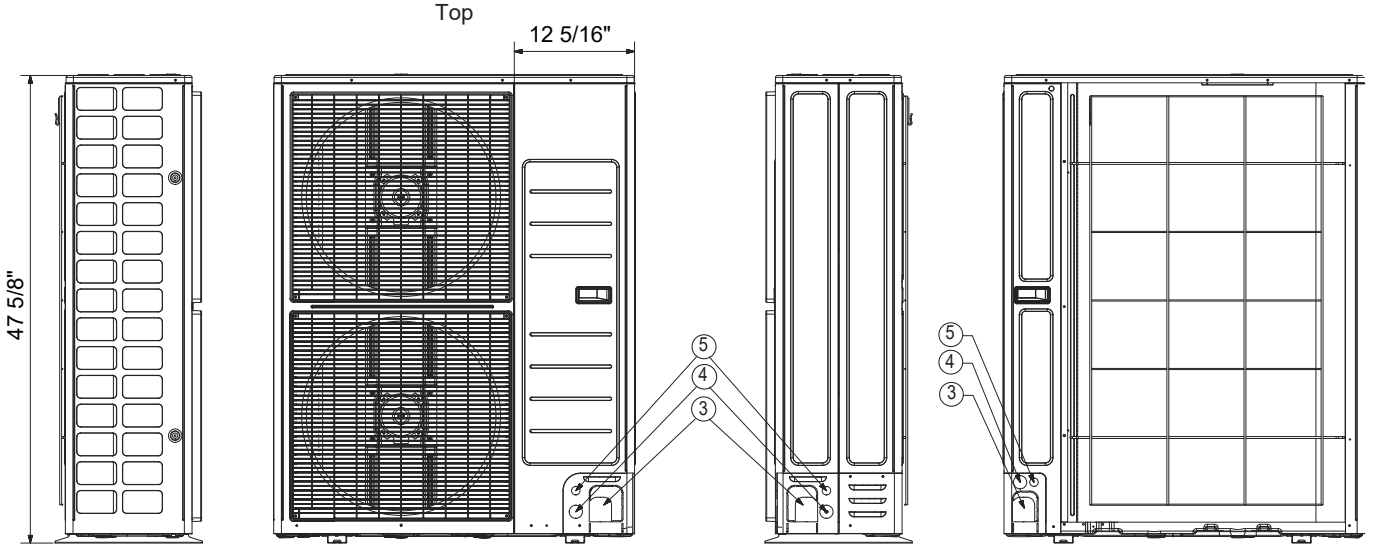
Samsung DVM S Eco Series, Heat Recovery Condensing

Unit AM048NXMDCR/AA Dimensional Drawing

Units: inches

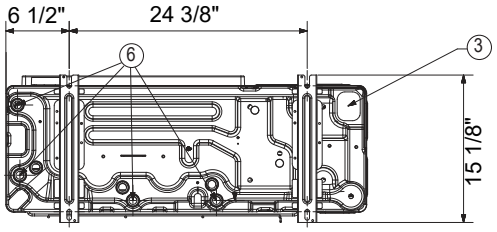


Top

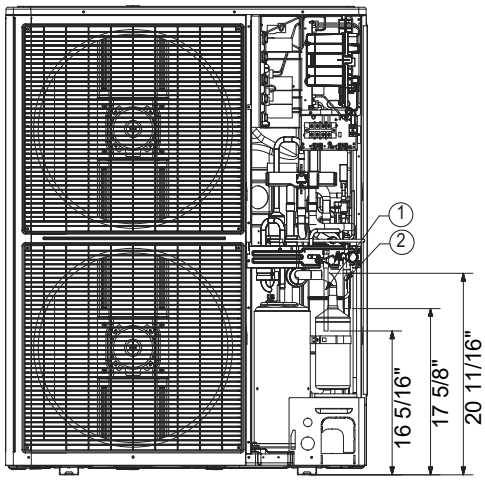


Front

Rear



Bottom



Front without cover

NO	Name	Description
1	Refrigerant liquid pipe	3/8"
2	Refrigerant gas pipe	3/4"
3	Knockout hole for pipe intake	Front / Side / Rear / Bottom
4	Power wiring conduits	Front / Side / Rear, 1 3/8"
5	Communication wiring conduits	Front / Side / Rear, 7/8"
6	Drain holes	Connect with the provided drain plug