SAMSUNG

SUBMITTAL AC024BNHDCH/AA / AC024BXADCH/AA (CNH24HDB / CXH24ADB)

Samsung Duct S, Single Zone Duct, Split System

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation _____ Schedule # _____

Specifications

Model	Indoor Unit Model Number (US Code)		AC024BNHDCH/AA (CNH24HDB)
	Outdoor Unit Model Number (US Code)		AC024BXADCH/AA (CXH24ADB)
Performance	Nominal Capacity	Cooling / Heating (Btu/h)	24,000 / 27,000
	Capacity Range	Cooling (Btu/h)	8,400 - 32,000
		Heating (Btu/h)	7,000 - 39,000
	AHRI 210-240 2017[1]	SEER	20.5
		EER	12.6
		HSPF	11.0
	AHRI 210-240 2023[2]	SEER2	19.5
		EER2	12.0
		HSPF2	8.4
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Operating Current (min. / std. / max.)	Cooling (A)	2.4 / 8.8 / 14.2
		Heating (A)	2.3 / 11.0 / 23.5
	Max. Breaker	Amps	30
	Min. Circuit Ampacity (A)		24.1
Dimensions	W X H X D (in.)	Indoor Unit	47 1/4 X 9 13/16 X 27 9/16
		Outdoor Unit	37 X 39 5/16 X 13
	Weight (lbs.)	Indoor Unit	77.2
		Outdoor Unit	158.7
	Duct Connections (W X H)	Supply (in.)	45 15/16 X 8 11/16
		Return (ID, in.)	45 15/16 X 8 11/16
Sound Pressure Level	Indoor Unit dB(A)	L / M / H	28 / 32 / 36
	Outdoor Unit dB(A)	Cooling / Heating (high)	50 / 52
Operating Temperatures	Outdoor	Cooling	23 ~ 122°F (-5 ~ 50°C)
			0 ~ 122°F (-18 ~ 50°C) W/Baffle
		Heating	-13 - 75°F (-25 - 24°C)
	Indoor	Cooling	64 ~ 90°F (16 ~ 32°C)
		Heating	T ≤ 86°F (30°C)
Pipe Connections	Indoor & Outdoor	High side	1/4"
		Low side	5/8"
	Maximum (ft.)		164
	Maximum Vertical Separation (ft.)		98.4
	Condensate Connection		1 1/4 in. OD, 1 in. ID
Refrigerant	Type		R410A
	Factory Charge	lbs.	5.73
	Charged for		24.6 ft.
Compressor	Manufacturer		Samsung
	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	15.9
Evaporator Fan	Type		BLDC (1) With Sirocco Fan (3)
	Air Volume	CFM (L/M/H)	593 / 671 / 749
	Output	Watts	153
	External Static Pressure	Standard ("WC)	0.18
		Min. / Max. ("WC)	0.1 / 0.8
Condenser Fan	Motor		BLDC With Axial Type Fan (1)
	FLA / Watts / CFM (max.)		1.25A X 1 / 125W X 1 / 2,684 CFM
Safety	Certifications		UL 60335-2-40
	Devices		PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing

This publication reflects both the 1987 Appendix M metric (SEER) and the 2023 Appendix M1 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy metrics.

[1]Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.
[2]Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

Select models are ENERGY STAR Labeled. Proper sizing and installation of equipment is critical to achieve performance. Split system air conditioners and heat pumps (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit www.energystar.gov.

SHA-CAC-HA024-2212A

General Information

- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- High-voltage terminal block temperature sensor to disable unit in the event of power connection overheating
- Integral condensate pump with maximum 29" lift from bottom of the unit with check valve and float switch that disables indoor should condensate overflow be detected.
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube
- The condensing unit heat exchanger salt spray test method: ISO-9227 - the heat exchanger showed no unusual rust or corrosion development to 3,000 hours.
- Base pan heater equipped as standard
- System shall provide 100% heating capacity at -4°F(-20°C)

Option settings

- The outdoor unit shall have snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Night-time Quiet Mode: reduction of operational sound during evening hours *(automatic or manual activation).*
- Emergency Temperature Output (ETO) function: when indoor unit is in error status or when room temperature exceeds configurable temperature level, the system outputs a signal to an external source, e.g., backup system, building management system, alert device (ex: status light, warning lamp, buzzer).
- System can be set up as heating/cooling, cooling only, or heating only via outdoor unit option setting.
- Maximum Current Control configurable from 50% - 100% via outdoor unit, wired controller, or central controller

Indoor Fan

- Indoor fan is sirocco type
- Three fan speed settings and auto setting
- Smart pressure control feature that adjusts fan speed based on ESP delivering consistent heating and cooling power
- The indoor unit shall have a smart-tuning function that can provide optimized comfort by allowing the occupant to offset the fan CFM curve with a wired remote controller (MWR-WG00UN) to increase or decrease airflow.
- The indoor unit shall have automatic air volume scanning for simple setup and optimized comfort settings for the occupant.

Construction

- Outdoor unit shall be galvanized steel with a baked-on powder coated finish for durability
- Indoor Unit: Insulated, galvanized steel.

Controls

- Control wiring shall be 2 X 16 AWG
- No additional interface modules/adapters are required when connecting to Samsung central control options.
- The unit shall be operated via a wireless or wired remote control with DDC type signal
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller or central control options.
- Wired or wireless controllers must be purchased separately

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled BLDC rotary type.
- Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Air Filtration

- Air filtration shall be field provided
- Pressure drop across field-supplied filter must be factored into the total ESP.

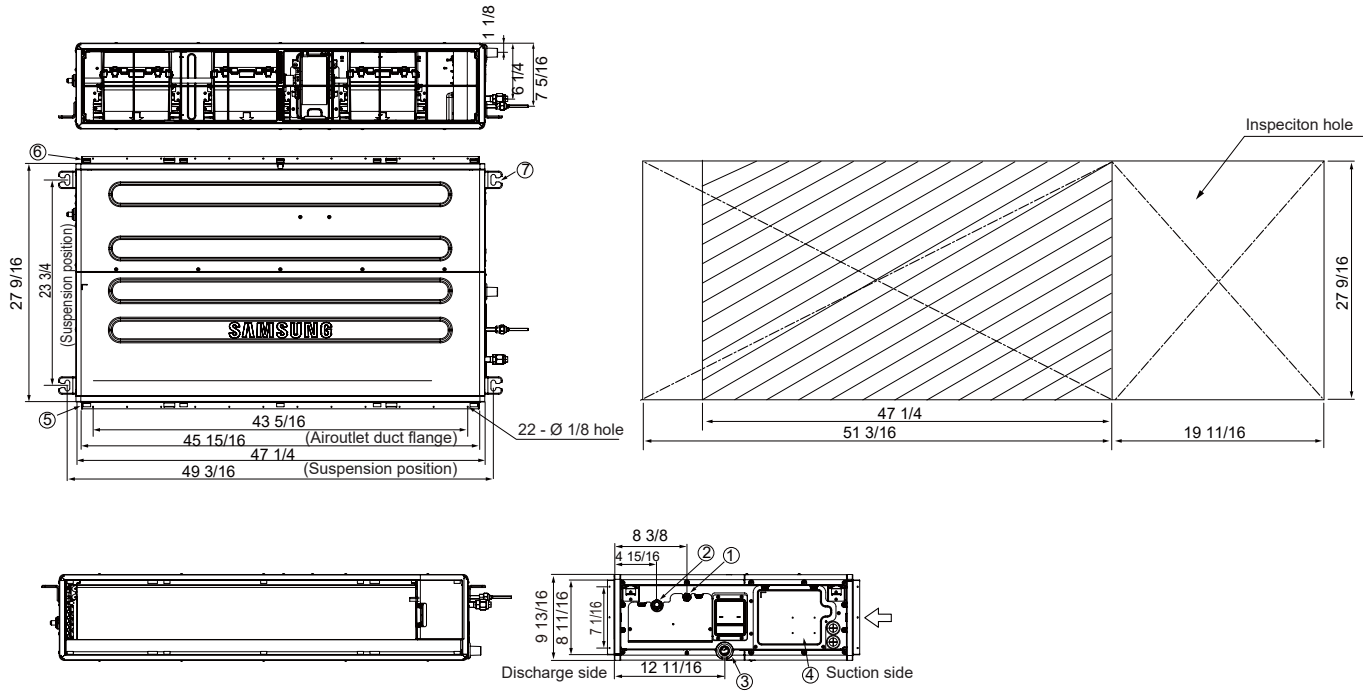
Warranty

10 Years compressor, 10 years parts, 1 year limited labor when registered

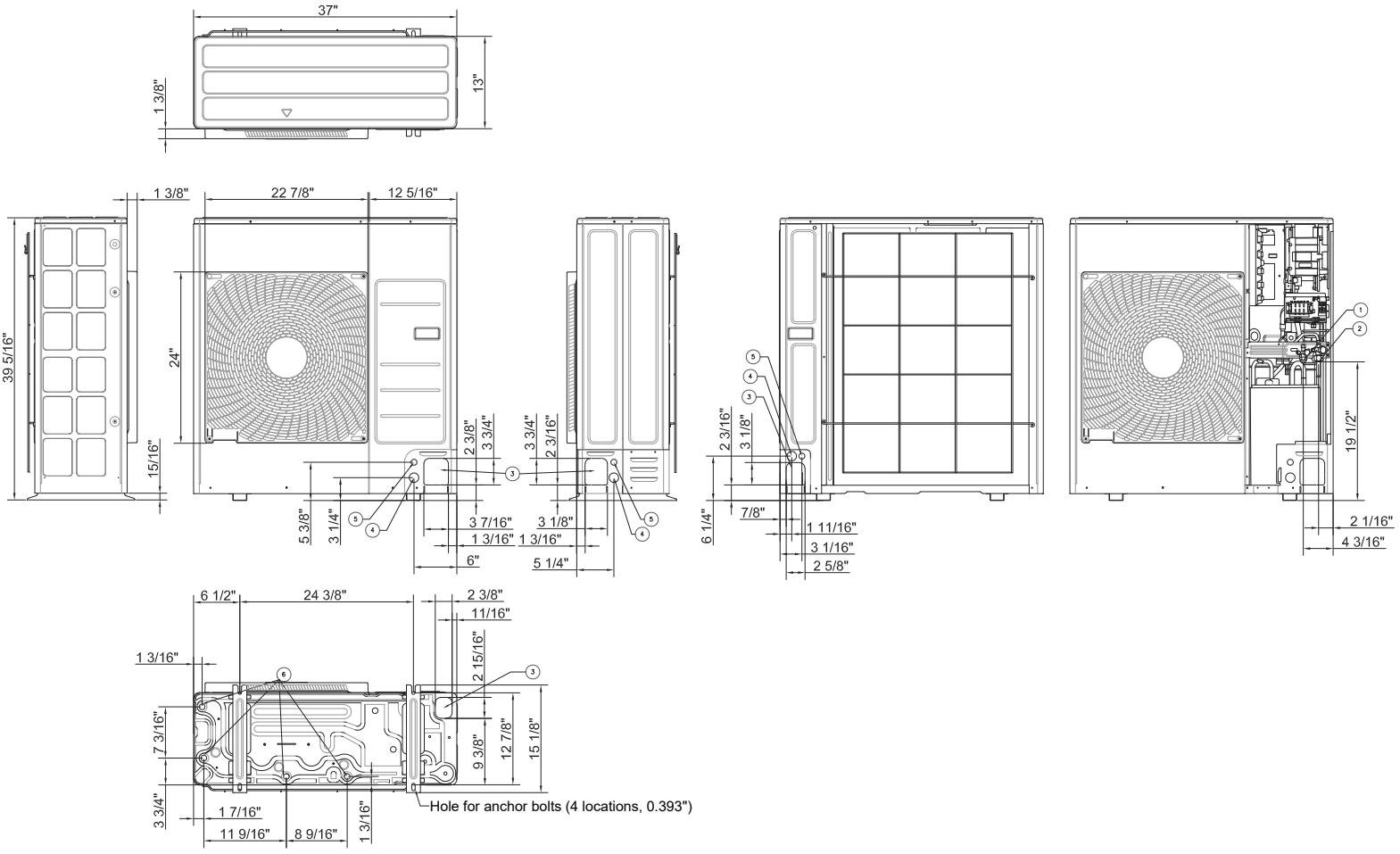
ENERGY STAR ENERGY STAR COLD CLIMATE AHRI CERTIFIED www.ahridirectory.org Unitary Small AC AHRI Standard 210/240 C SA US

Optional Accessories

Wired Controller	Advanced	☐ MWR-WG00UN
	Touchscreen	☐ MWR-SH11UN
Thermostat Adaptor (for connection to a standard 24VAC thermostat)		☐ MIM-A60UN
Wireless Signal Control	Wireless Signal Receiver	☐ MRK-A10N
	Wireless Controller	☐ AR-EH04U
Wi-Fi Adapter		☐ MIM-H05UN
External Temperature Sensor		☐ MRW-TA
Filter Box		☐ FB-DS2
External Contact Control		☐ MIM-B14
Wall Bracket (for outdoor unit)		☐ CKN-250
Wind Baffles	Front	☐ WBF-2M-B
	Back	☐ WBB-3M
Hail Guard Kit (includes back and side guards)		☐ HGK-3
Line Sets - insulated and flared, interconnect cables included		☐ 25' - ILS-2509
		☐ 50' - ILS-5009



No.	Name	Description
①	Refrigerant Liquid Pipe	Ø 1/4"
②	Refrigerant Gas Pipe	Ø 5/8"
③	Condensate Drain	3/4" (OD 1.05")
④	Power & Comm. Wiring Conduits	-
⑤	Supply Air Flange	-
⑥	Return Air Flange	-
⑦	Hook	-



No.	Name	Description
1	Liquid pipe connection	ø 1/4"
2	Gas pipe connection	ø 5/8"
3	Piping knockout hole	Front, side, rear, and bottom
4	Power supply knowkout hole	Front, side, and rear (ø 1 3/8")
5	Comm. Wiring knockout hole	Front, side, and rear (ø 7/8")
6	Drain hole	Connect using provided drain fitting