

# SAMSUNG

## Submittal Data

AC048DNZDCG/AA (CNG48ZDD) / AC048DXSCCG/AA (CXG48SCD)

Multi-Position Air Handler, Single Zone, Heat Pump, Split System (Premium)

Job Name: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Submitted to: \_\_\_\_\_

Unit designation: \_\_\_\_\_

Location: \_\_\_\_\_

Engineer: \_\_\_\_\_

Reference ☐ Approval ☐ Construction ☐

Schedule #: \_\_\_\_\_

### General Information

- The system shall provide high heating capacity at -4°F (-20°C) with heating operation down to -13°F (-25°C).
- The outdoor unit shall have a base pan heater as standard for optimal defrost cycle water drainage.
- The system shall feature comfort humidity control. Utilizing an integral humidity sensor, the system optimizes the indoor unit coil temperature according to the dew point, maximizing energy savings while still providing space dehumidification and occupant comfort.
- The system shall have a built-in Wi-Fi adapter as standard to allow control and monitoring using the Samsung SmartThings app.
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- The outdoor unit shall provide 208/230V power to the indoor unit via 14 AWG X 3 interconnect power cable.

### Construction

- Outdoor unit: Galvanized steel with a baked-on powder coated finish for durability.
- Indoor unit: Insulated, galvanized steel.
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube.
- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire (when accessory electric heat kits are not installed).

### Refrigerant System

- The system shall utilize low-GWP R-32 refrigerant
- Refrigerant flow shall be controlled by electronic expansion valve at the outdoor unit
- The system shall include an R32 alarm output plug on the indoor unit and outdoor unit for notification of R32 leak detection (MIM-B14U accessory is required).

### Indoor Fan

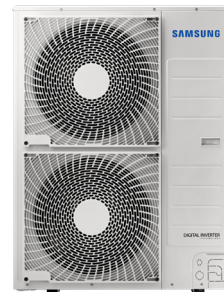
- Three fan speeds and auto setting

### Controls

- Control wiring shall be 2 X 16 AWG wire.
- 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 supported controllers.
- Wired or wireless controllers must be purchased separately.

### External Heat Control (not required for use with VHK-\*\*\*C Electric Heat Kits)

- External heat control functionality allows for configuration of fan operation during auxiliary heat operation, defrost, and emergency heat (MIM-B14U accessory required when controlling heating devices other than VHK-\*\*\*C electric heat kits).
- External heat control configuration settings include outside ambient external heat lockout, outside ambient compressor lockout, and time delay options (MIM-B14U accessory required when controlling heating devices other than VHK-\*\*\*C electric heat kits).
- Emergency heat functionality allows the system to continue controlling the exter-



Note: Unit appearance may vary slightly

nal heat source even when system errors prevent the heat pump from operating (MIM-B14U accessory required when controlling heating devices other than VHK-\*\*\*C electric heat kits).

- External heat control functionality allows for configuration of fan operation during auxiliary heat operation, defrost, and emergency heat
- Emergency heat functionality allows the system to continue controlling the external heat source even when system errors prevent the heat pump from operating

### Convenience

- 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).
- The system can be configured 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 control.



Intertek



Proper sizing and installation of equipment is critical to achieve optimal 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 or visit [www.energystar.gov](http://www.energystar.gov).

Samsung HVAC maintains a policy of ongoing development. Specifications are subject to change without notice. Refer to [www.AHRIdirectory.org](http://www.AHRIdirectory.org) for current reference numbers.

# System Specifications

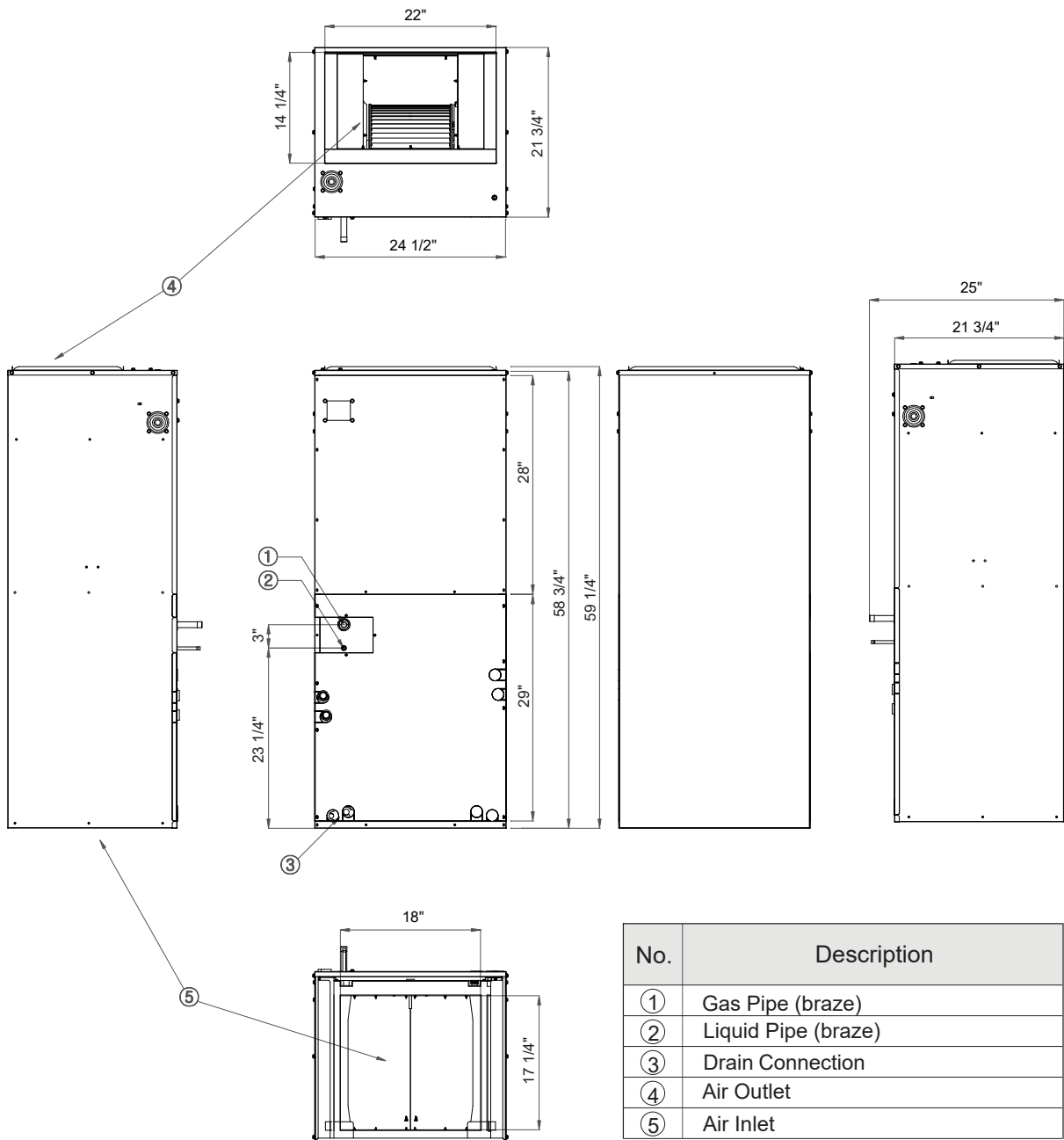
|                        |                                                                                                         |                           |                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------|
| Model                  | Indoor Unit Model Number (US Code)                                                                      |                           | AC048DNZDCG/AA (CNG48ZDD)                                         |
|                        | Outdoor Unit Model Number (US Code)                                                                     |                           | AC048DXSCCG/AA (CXG48SCD)                                         |
| Performance            | Nominal Capacity                                                                                        | Cooling / Heating (Btu/h) | 48,000 / 54,000                                                   |
|                        | Capacity Range                                                                                          | Cooling (Btu/h)           | 12,500 - 56,000                                                   |
|                        |                                                                                                         | Heating (Btu/h)           | 11,000 - 68,000                                                   |
|                        | AHRI 210-240 2023                                                                                       | SEER2                     | 18.00                                                             |
|                        |                                                                                                         | EER2                      | 12.00                                                             |
|                        |                                                                                                         | HSPF2 (region IV)         | 9.50                                                              |
|                        |                                                                                                         | 5°F COP                   | 1.80                                                              |
| Power                  | Voltage                                                                                                 | ø / V / Hz                | 1 / 208-230 / 60                                                  |
|                        | Working Voltage Range (VAC)                                                                             |                           | 187 - 253                                                         |
|                        | Operating Current<br>(min. / standard / max.)                                                           | Cooling (A)               | 4.9 / 17.9 / 30.6                                                 |
|                        |                                                                                                         | Heating (A)               | 4.1 / 22.8 / 32.0                                                 |
|                        | Max. Breaker                                                                                            | Amps                      | 40.0                                                              |
|                        | Min. Circuit Ampacity                                                                                   | Amps                      | 36.2                                                              |
| Dimensions             | W X H X D (in.)                                                                                         | Indoor Unit               | 24 1/2 X 58 11/16 X 21                                            |
|                        |                                                                                                         | Outdoor Unit              | 37 X 55 7/8 X 13                                                  |
|                        | Weight (lbs.)                                                                                           | Indoor Unit               | 166.40                                                            |
|                        |                                                                                                         | Outdoor Unit              | 211.60                                                            |
|                        | Duct Connections (W X H)                                                                                | Supply (in.)              | 14 1/4 X 21 3/4                                                   |
|                        |                                                                                                         | Return (in.)              | 24 1/2 X 21 3/4                                                   |
| Sound Pressure Level   | Indoor Unit dB(A)                                                                                       | L / M / H                 | 43 / 45 / 47                                                      |
|                        | Outdoor Unit dB(A)                                                                                      | Cooling / Heating (high)  | 62 / 62                                                           |
| Operating Temperatures | Outdoor                                                                                                 | Cooling                   | 23 - 122°F (-5 - 50°C)                                            |
|                        |                                                                                                         |                           | -4 - 122°F (-20 - 50°C) W/Baffle                                  |
|                        | Indoor                                                                                                  | Heating                   | -13 - 75°F (-25 - 24°C)                                           |
|                        |                                                                                                         | Cooling                   | 64 ~ 90°F (16 ~ 32°C)                                             |
|                        |                                                                                                         | Heating                   | T ≤ 86°F (30°C)                                                   |
| Pipe Connections       | Indoor & Outdoor                                                                                        | High side (In.)           | 3/8                                                               |
|                        |                                                                                                         | Low side (In.)            | 5/8                                                               |
|                        | Maximum (ft.)                                                                                           |                           | 246                                                               |
|                        | Maximum Vertical Separation (ft.)                                                                       |                           | 98                                                                |
|                        | Condensate Connection                                                                                   |                           | 3/4" FNPT                                                         |
| Refrigerant            | Type                                                                                                    |                           | R-32                                                              |
|                        | A2L Leak Detection                                                                                      |                           | Integral                                                          |
|                        | Factory Charge/Max Charge                                                                               | oz.                       | 123.5 / 195.04                                                    |
|                        | Charged for                                                                                             |                           | 24.6 ft.                                                          |
|                        | Trim Charge                                                                                             | oz./ft                    | 0.323                                                             |
| Compressor             | Type                                                                                                    |                           | Inverter Driven, Twin BLDC Rotary                                 |
|                        | RLA                                                                                                     | Amps                      | 22.4                                                              |
| Evaporator Fan         | Type                                                                                                    |                           | Constant Torque With Double-inlet, Forward Curve, Centrifugal Fan |
|                        | Output                                                                                                  | Watts                     | 590                                                               |
|                        | External Static Pressure                                                                                | Standard ("WC)            | 0.58                                                              |
|                        |                                                                                                         | Min. / Max. ("WC)         | 0 / 1                                                             |
| Airflow                | Air Volume (L/M/H)                                                                                      | Cooling (CFM)             | 1,257 / 1,388 / 1,494                                             |
|                        |                                                                                                         | Heating (CFM)             | 1,257 / 1,388 / 1,494                                             |
| Condenser Fan          | Type                                                                                                    |                           | BLDC With Axial Type Fan (2)                                      |
|                        | MOC / Watts / CFM (max.)                                                                                |                           | 1.2A X 2 / 125W X 2 / 4,415                                       |
| Corrosion Prevention   | ISO-9227 - The condenser heat exchanger showed no unusual rust or corrosion development to 2,280 hours. |                           |                                                                   |
| Safety                 | Certifications                                                                                          | UL 60335-2-40             |                                                                   |

## Accessories

|                                                                   |                          |                          |            |
|-------------------------------------------------------------------|--------------------------|--------------------------|------------|
| Wired controller                                                  | Advanced                 | <input type="checkbox"/> | MWR-WG01UN |
|                                                                   | Touchscreen              | <input type="checkbox"/> | MWR-SH12UN |
| Thermostat adapter (for connection to standard 24VAC thermostats) |                          | <input type="checkbox"/> | MIM-A60UN  |
| Wireless signal control                                           | Wireless signal receiver | <input type="checkbox"/> | MRK-A10UN  |
|                                                                   | Wireless controller      | <input type="checkbox"/> | AR-CH01U   |
| External temperature sensor                                       |                          | <input type="checkbox"/> | MRW-TAU    |
| External contact control interface module                         |                          | <input type="checkbox"/> | MIM-B14U   |
| Filter box                                                        |                          | <input type="checkbox"/> | VFB-3      |
| Supplemental electric heat kit                                    | 5kW                      | <input type="checkbox"/> | VHK-305C   |
|                                                                   | 10kW                     | <input type="checkbox"/> | VHK-310C   |
|                                                                   | 15kW                     | <input type="checkbox"/> | VHK-315C   |
| Wall bracket (for outdoor unit)                                   |                          | <input type="checkbox"/> | CKN-250    |
| Wind baffles                                                      | Front                    | <input type="checkbox"/> | WBF-8M     |
|                                                                   | Back                     | <input type="checkbox"/> | WBB-4M     |
| Hail guard kit (includes back and side guards)                    |                          | <input type="checkbox"/> | HGK-5      |
| Line set - insulated and flared, interconnect cables included     | 25'                      | <input type="checkbox"/> | ILS2510    |
|                                                                   | 50'                      | <input type="checkbox"/> | ILS5010    |

Dimensional Drawing  
AC048DNZDCG/AA (CNG48ZDD)

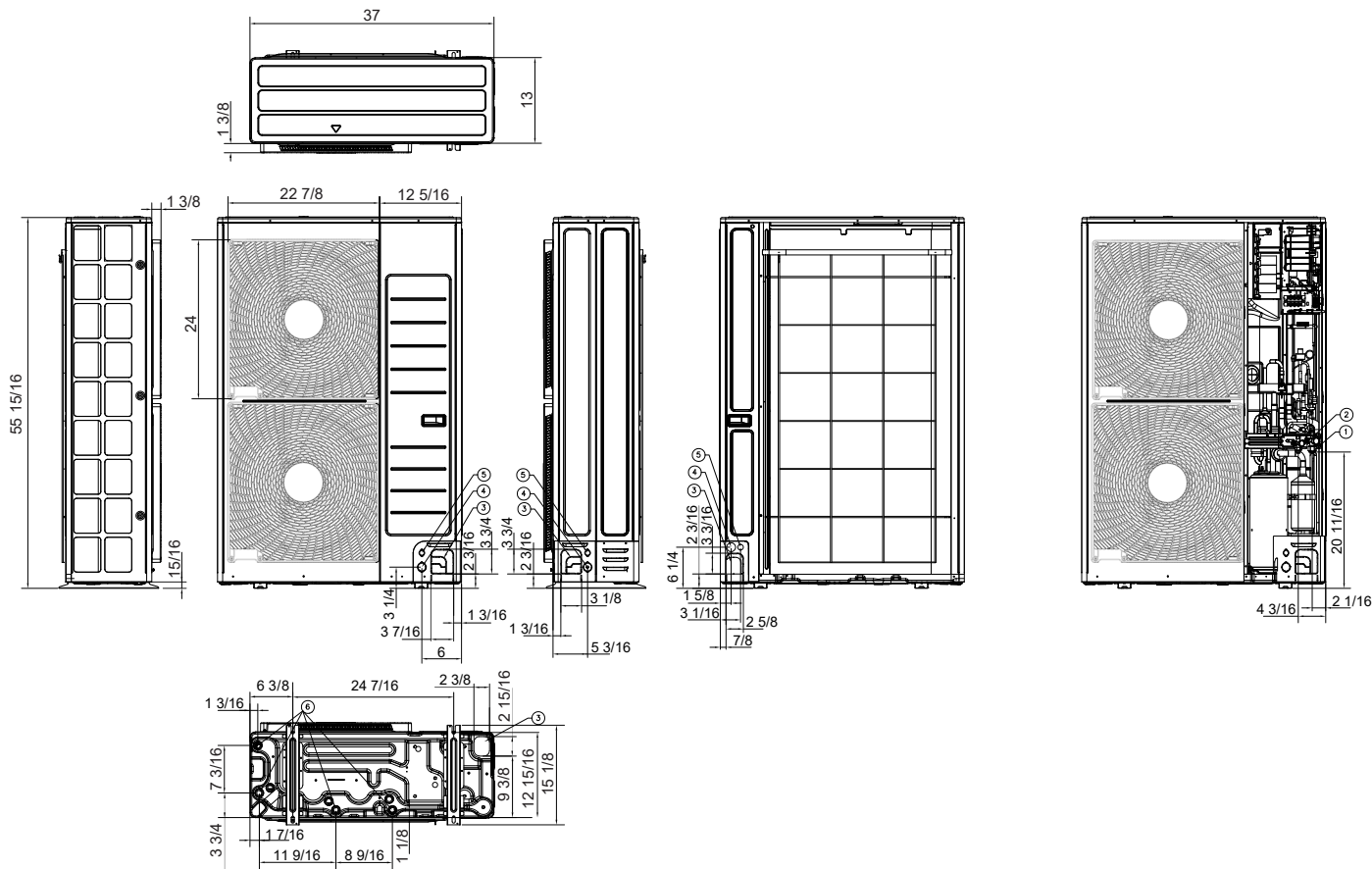
Unit: Inches



| No. | Description          |
|-----|----------------------|
| ①   | Gas Pipe (brazed)    |
| ②   | Liquid Pipe (brazed) |
| ③   | Drain Connection     |
| ④   | Air Outlet           |
| ⑤   | Air Inlet            |

Dimensional Drawing  
AC048DXSCCG/AA (CXG48SCD)

Unit: Inches



| No. | Description                              |
|-----|------------------------------------------|
| 1   | Liquid pipe connection                   |
| 2   | Gas pipe connection                      |
| 3   | Pipe intake knockout hole                |
| 4   | Opening for power wire conduit (1 3/8")  |
| 5   | Opening for communication conduit (7/8") |
| 6   | Drain hole                               |