



# SUBMITTAL AC024JNHDCH/AA Samsung, Single Zone Duct, Split System

Page 1 of 3  
www.Quietside.com

Job Name \_\_\_\_\_  
Purchaser \_\_\_\_\_  
Submitted to \_\_\_\_\_  
Unit Designation \_\_\_\_\_

Location \_\_\_\_\_  
Engineer \_\_\_\_\_  
Reference \_\_\_\_\_ Approval \_\_\_\_\_ Construction \_\_\_\_\_  
Schedule # \_\_\_\_\_

## Specifications

|                             |                                                                                                                                                                                               |                           |                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------|
| Model                       | Indoor Unit Model Number                                                                                                                                                                      |                           | AC024JNHDCH/AA                          |
|                             | Outdoor Unit Model Number                                                                                                                                                                     |                           | AC024JXADCH/AA                          |
| Performance                 | Nominal Capacity                                                                                                                                                                              | Cooling / Heating (Btu/h) | 24,000 / 27,000                         |
|                             | Capacity Range                                                                                                                                                                                | Cooling (Btu/h)           | 7,000 - 27,000                          |
|                             |                                                                                                                                                                                               | Heating (Btu/h)           | 5,200 - 31,000                          |
|                             | SEER / EER                                                                                                                                                                                    |                           | 20.0 / 12.10                            |
|                             | COP (nominal heating)                                                                                                                                                                         |                           | 3.99                                    |
|                             | HSPF                                                                                                                                                                                          |                           | 10.5                                    |
|                             | AHRI Certification Number                                                                                                                                                                     |                           | 8032088                                 |
| Condensate (pints/hour)     |                                                                                                                                                                                               | 6.13                      |                                         |
| Power                       | Voltage                                                                                                                                                                                       | ø / V / Hz                | 1 / 208-230 / 60                        |
|                             | Working Voltage Range (VAC)                                                                                                                                                                   |                           | 176 - 254 (max. 3% deviation from each) |
|                             | Operating Current (min. / std. / max.)                                                                                                                                                        | Cooling (A)               | 2.8 / 9.2 / 12.0                        |
|                             |                                                                                                                                                                                               | Heating (A)               | 2.5 / 10.8 / 14.5                       |
|                             | Max. Breaker                                                                                                                                                                                  | Amps                      | 20                                      |
| Min. Circuit Ampacity (A)   |                                                                                                                                                                                               | 11.7                      |                                         |
| Dimensions                  | W X H X D (inches)                                                                                                                                                                            | Indoor Unit               | 45 1/4 x 12 9/16 x 18 7/8               |
|                             |                                                                                                                                                                                               | Outdoor Unit              | 37 X 39 11/16 X 12 3/4                  |
|                             | Weight (lbs.)                                                                                                                                                                                 | Indoor Unit               | 94.8                                    |
|                             |                                                                                                                                                                                               | Outdoor Unit              | 142                                     |
|                             | Duct Connections (W X H)                                                                                                                                                                      | Supply (inches)           | 39 3/8 X 9 5/16                         |
|                             | Return (ID, inches)                                                                                                                                                                           | 37 1/2 X 8 3/4            |                                         |
| Heat Exchanger              | Indoor & Outdoor Unit                                                                                                                                                                         | Type                      | Aluminum Fin / Copper Tube              |
|                             |                                                                                                                                                                                               | FPI                       | 18                                      |
|                             |                                                                                                                                                                                               | Pipe Diameter (inches)    | 1/4                                     |
|                             | Outdoor Unit                                                                                                                                                                                  | Type                      | Aluminum, flat fin, micro channel       |
| Sound Pressure Level        | Indoor Unit dB(A)                                                                                                                                                                             | L / M / H                 | 28 / 32 / 36                            |
|                             | Outdoor Unit dB(A)                                                                                                                                                                            | Cooling / Heating (high)  | 50 / 50                                 |
| Operating Temperatures (°F) | Outdoor                                                                                                                                                                                       | Cooling                   | 23 ≤ T ≤ 115                            |
|                             |                                                                                                                                                                                               | Heating                   | 0 ≤ T ≤ 115 w/wind baffle               |
|                             | Indoor                                                                                                                                                                                        | Cooling                   | -4 ≤ T ≤ 76                             |
|                             |                                                                                                                                                                                               | Heating                   | 61 ≤ T ≤ 90                             |
|                             |                                                                                                                                                                                               | Heating                   | T ≤ 80                                  |
| Pipe Connections            | Indoor & Outdoor                                                                                                                                                                              | High side (flare)         | 1/4"                                    |
|                             |                                                                                                                                                                                               | Low side (flare)          | 5/8"                                    |
|                             | Maximum (ft.)                                                                                                                                                                                 |                           | 164                                     |
|                             | Maximum Vertical Separation (ft.)                                                                                                                                                             |                           | 98                                      |
|                             | Condensate Connection                                                                                                                                                                         |                           | 1" OD, 3/4" ID                          |
| Refrigerant                 | Type                                                                                                                                                                                          |                           | R410A                                   |
|                             | Control Method                                                                                                                                                                                |                           | Electronic Expansion Valve              |
|                             | Factory Charge                                                                                                                                                                                | oz.                       | 74.08                                   |
|                             | Charged for                                                                                                                                                                                   |                           | 25 feet                                 |
|                             | Additional Refrigerant                                                                                                                                                                        |                           | 0.11 oz/ft over 25 feet                 |
| Compressor                  | Manufacturer                                                                                                                                                                                  |                           | Samsung                                 |
|                             | Type                                                                                                                                                                                          |                           | Inverter Driven, Twin BLDC, Rotary      |
|                             | RLA                                                                                                                                                                                           | A                         | 9.0                                     |
| Evaporator Fan              | Type                                                                                                                                                                                          |                           | BLDC (1) With Sirocco Fan (2)           |
|                             | Air Volume                                                                                                                                                                                    | CFM (L/M/H)               | 540 / 640 / 740                         |
|                             | Output (W) / FLA (A)                                                                                                                                                                          |                           | 183 W / 0.85 A                          |
|                             | Static Pressure                                                                                                                                                                               | Standard ("WC)            |                                         |
| Min. / Max. ("WC)           |                                                                                                                                                                                               | 0 - 0.6                   |                                         |
| Condenser Fan               | Motor                                                                                                                                                                                         |                           | BLDC With Axial Type Fan (1)            |
|                             | FLA / Watts / CFM (max.)                                                                                                                                                                      |                           | 0.48 A / 125 W / 2,190 CFM              |
| Optional Accessories        | Wired Controller                                                                                                                                                                              | Simplified                | MWR-SH00N                               |
|                             |                                                                                                                                                                                               | Premium w/scheduling      | MWR-WE10N                               |
|                             | Wireless Signal Control                                                                                                                                                                       | Wireless Signal Receiver  | MRK-A00N                                |
|                             |                                                                                                                                                                                               | Wireless Controller       | MR-DH00U                                |
|                             | External Temperature Sensor                                                                                                                                                                   |                           | MRW-TA                                  |
|                             | Filter Box                                                                                                                                                                                    |                           | FB-M3036                                |
|                             | External Contact Control                                                                                                                                                                      |                           | MIM-B14                                 |
|                             | Central Control Interface Module for Connection to DVM Plus Controls (non-NASA)                                                                                                               |                           | MIM-N01                                 |
|                             | Wall Bracket (for outdoor unit)                                                                                                                                                               |                           | CKN-250                                 |
|                             | Wind Baffles                                                                                                                                                                                  | Front                     | TBA                                     |
|                             |                                                                                                                                                                                               | Back                      | TBA                                     |
|                             | Line Sets - insulated and flared, interconnect cables included                                                                                                                                |                           | 25' - ILS-2509                          |
|                             |                                                                                                                                                                                               | 50' - ILS-5009            |                                         |
| Safety                      | Certifications                                                                                                                                                                                | ETL & ETLc                |                                         |
|                             | Devices: PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing |                           |                                         |



- Horizontal discharge airflow
- Low ambient control built in
- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- Auto-restart after power loss
- The outdoor unit shall have a snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- The indoor and outdoor units shall have a removable EEPROM that stores system programming information, unit name, and other data
- All indoor unit addressing and option settings shall be done digitally; the indoor unit does not contain rotary dials or setting switches.
- The indoor unit shall have a built-in condensate pump as standard with a 29" lift (from bottom of unit).
- Pipe connections at the outdoor unit shall be made inside the unit chassis. Refrigerant pipes can exit through the front, side, rear, or bottom sides of the outdoor unit.
- The outdoor unit shall have a night time quiet mode option to reduce operating sound during the night (automatic or manual activation with dry contact signal).

## Construction

The outdoor unit shall be galvanized steel with a baked on powder coated finish for durability

The indoor unit shall be insulated, galvanized steel.

## Heat Exchanger

The indoor unit heat exchanger shall be mechanically bonded fin to copper tube

The outdoor unit heat exchanger shall be aluminum, flat fin, micro channel

## Controls

Control signal shall be a DDC type signal

Interconnect control wire between outdoor indoor unit shall be 16AWG X 2 shielded

Wired or wireless controls must be purchased separately

Connection to optional wired controllers shall be 2 X 16AWG shielded wire

Controls shall integrate with a BMS system

The system shall integrate with the Samsung NASA Controls Solution

No additional interface modules/adapters are required when connecting to Samsung NASA DVM S central control options (MIM-D00AN, MIM-B17N, MIM-B18N, MCM-A300N).

## Refrigerant System

The refrigerant shall be R410A

The compressor shall be hermetically sealed, inverter controlled, twin BLDC Rotary

Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Soft-start to reduce current demand during compressor start

The outdoor unit shall be compatible with AC024JN4DCH/AA (cassette) and AC024JNHDCH/AA (duct) indoor units.

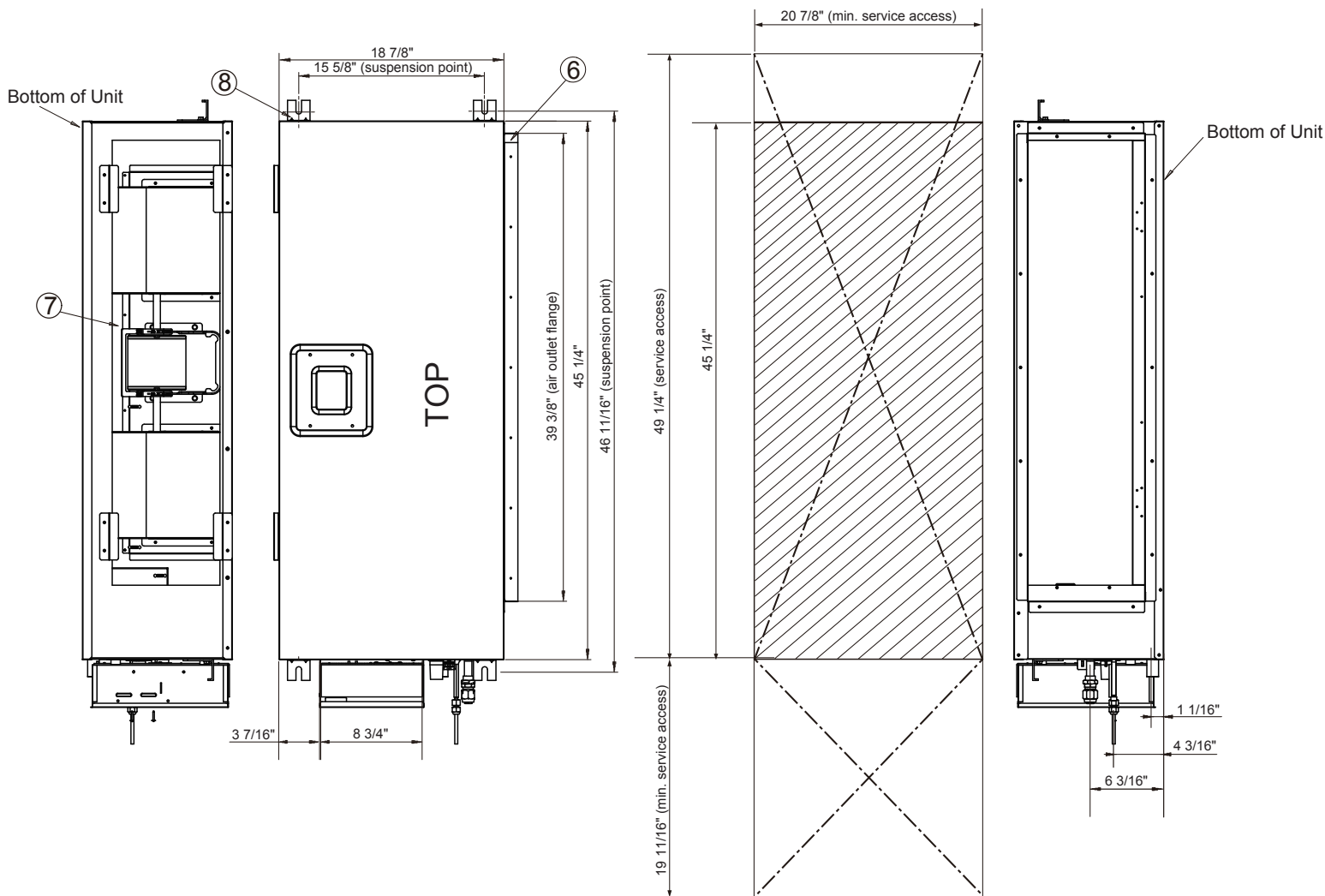
## Warranty

10 years compressor, 10 years parts, 1 year limited labor

\* Nominal cooling capacities are based on: Indoor temperature: 80°F DB, 67°F WB. Outdoor temperature: 95°F DB, 75°F WB.  
\* Nominal heating capacities are based on: Indoor temperature: 70 F DB, 60 F WB. Outdoor temperature: 47 F DB, 43 F WB.

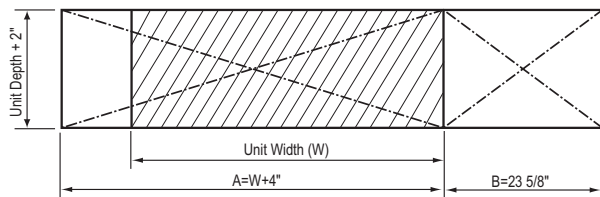
Quietside maintains a policy of ongoing development, specifications are subject to change without notice.  
Refer to www.AHRIdirectory.org for current reference numbers.





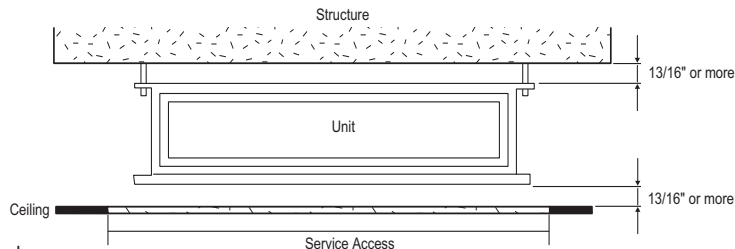
| No. | Name                                    | Description    |
|-----|-----------------------------------------|----------------|
| ①   | Liquid Pipe Connection                  | Ø 1/4" Flare   |
| ②   | Gas Pipe Connection                     | Ø 5/8" Flare   |
| ③   | Drain Pipe Connection (gravity drain)   | OD 1", ID 3/4" |
| ④   | Drain Pipe Connection (condensate pump) | OD 1", ID 3/4" |
| ⑤   | Control Box                             | -              |
| ⑥   | Air Discharge Flange                    | -              |
| ⑦   | Air Inlet                               | -              |
| ⑧   | Suspension Hook                         | 5/16" - 3/8"   |

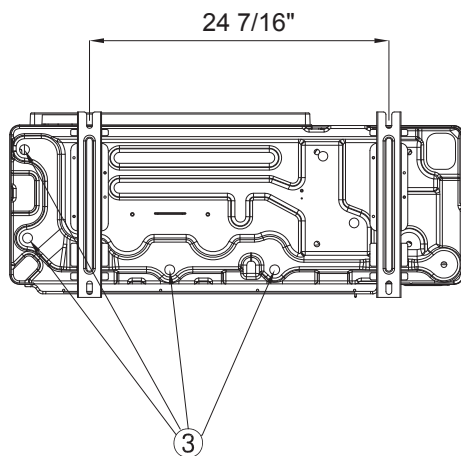
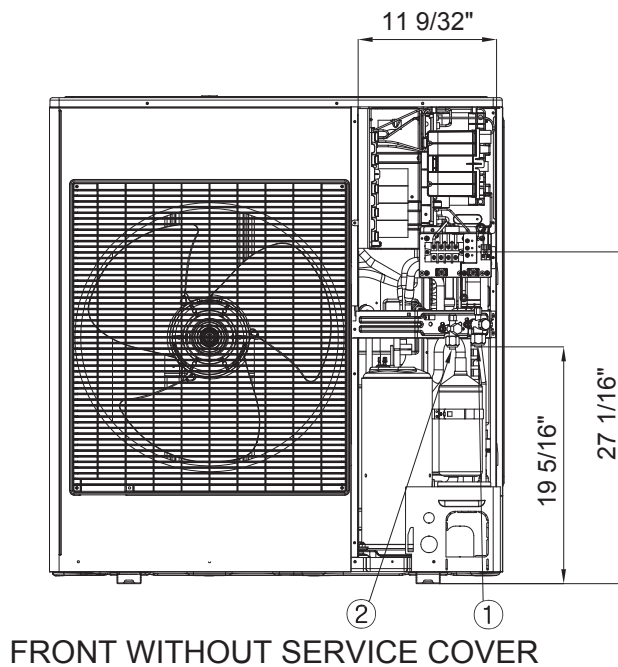
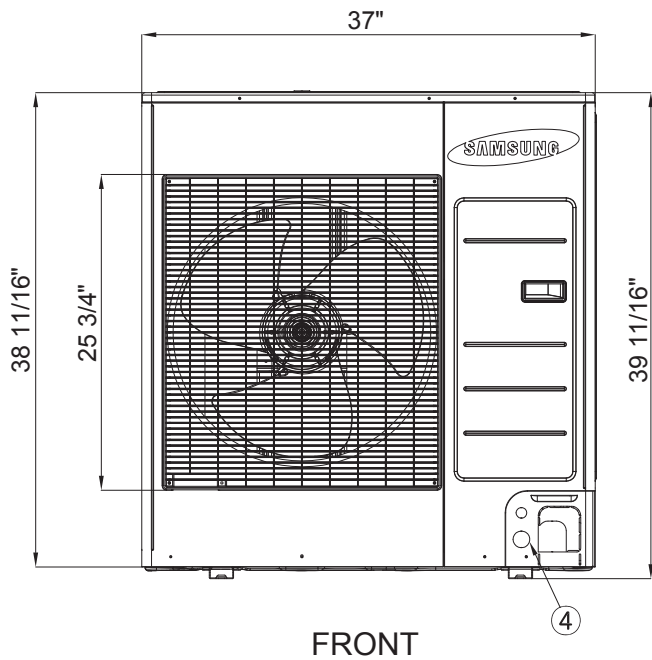
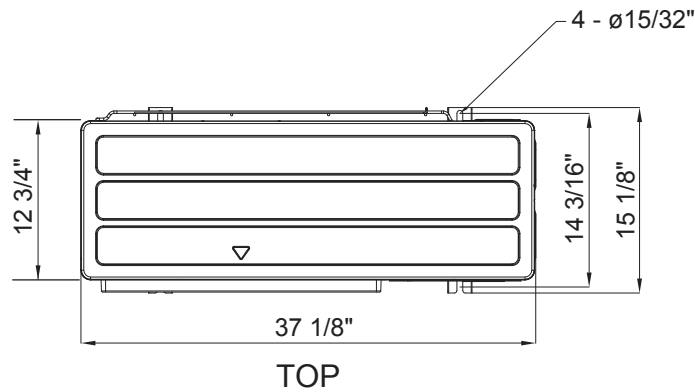
#### Inspection Opening Requirements



In applications where there is not a tile ceiling, an inspection hole is required.  
 If height between ceiling and structure is 3.25' or more, inspection opening "B" is recommended.  
 If height between ceiling and structure is less than 3.25', inspection opening "A" and "B" is recommended.  
 (verify state and local codes).

#### Unit Clearance From Structure





| No. | Description                              |
|-----|------------------------------------------|
| 1   | Liquid service valve                     |
| 2   | Suction service valve                    |
| 3   | Power and communication conduit openings |