



APOLLO

Ceiling Fan Coil Unit

INTRODUCTION

In today's world, where comfort, energy efficiency, and smart technology converge, Fan Coil Units (FCUs) stand out as a superior solution for personalized heating and cooling. These compact yet powerful systems are widely used in residential, commercial, and industrial settings, offering precise temperature control, quiet operation, and seamless integration with modern smart home ecosystems.

Why Choose Fan Coil Units?

FCUs are a cornerstone of modern HVAC systems, delivering fast, responsive, and energy-efficient climate management. Unlike traditional central air systems that rely on ductwork, FCUs circulate air directly through localized units, reducing energy loss and allowing for zone-specific temperature adjustments. This means no more wasting energy heating or cooling unoccupied rooms—just tailored comfort where you need it.



Key Advantages of MBTek's FCU Solutions:

- **Smart & Connected** – With WiFi-enabled thermostats and app-based controls, APOLLO's FCUs let you adjust settings remotely, create schedules, and even use voice commands via Alexa or Google Assistant.
- **Energy Efficiency** – Advanced programming modes, low-power fans, and adaptive operation reduce energy consumption without sacrificing performance.
- **Quiet & Discreet** – Engineered for minimal noise, making them ideal for bedrooms, offices, and hotels.
- **Easy Installation & Maintenance** – Designed for compatibility with most HVAC setups (2-pipe or 4-pipe systems), FCUs are a favorite among HVAC professionals for their reliability and serviceability.
- **Sleek & Space-Saving** – Modern, compact designs blend seamlessly into any interior, offering powerful climate control without bulky equipment.

Who Benefits from FCUs?

- Homeowners seeking personalized comfort with smart, energy-saving features.
- Businesses & Hotels needing zone-based climate control for guest rooms or office spaces.
- HVAC Professionals looking for easy-to-install, high-performance units with smart capabilities.
- Tech-Savvy Users who want IoT integration for a fully automated smart home.

As buildings become smarter and energy efficiency more critical, FCUs—especially when paired with intelligent thermostats—are leading the way in sustainable, user-friendly HVAC solutions. Whether you're upgrading an existing system or designing a new installation, MBTek's Fan Coil Units deliver performance, convenience, and innovation in one compact package.

INTRODUCTION

Ceiling Fan Coil FCU



High-Efficiency 3-Speed Fan

- ① Operates quietly with a max of 42W power consumption.

2-Pipe System with 4-Way Airflow

- ② Distributes air evenly without needing additional ductwork.

Dual Drain Outlet & Built-in Condensate Pump

- ③ Increases installation flexibility and effective drainage.

Compact Design with Pre-Drilled Holes

- ④ Easy ceiling installation in homes, offices, and garages.

Integrated Washable Air Filter

- ⑤ Ensures cleaner air and easy maintenance.

3/4" PEX Compatibility & Aluminum Fins

- ⑥ Simple plumbing connection and improved heat transfer.

1. CEILING FAN COIL UNITS SPECS

The APOLLO Ceiling Fan Coil FCU is designed for hassle-free setup. With a compact structure, pre-drilled mounting holes, and a 2-pipe connection system, it eliminates the need for ductwork or complex installation tools. Ideal for homes, offices, and garages, it minimizes installation time and cost.

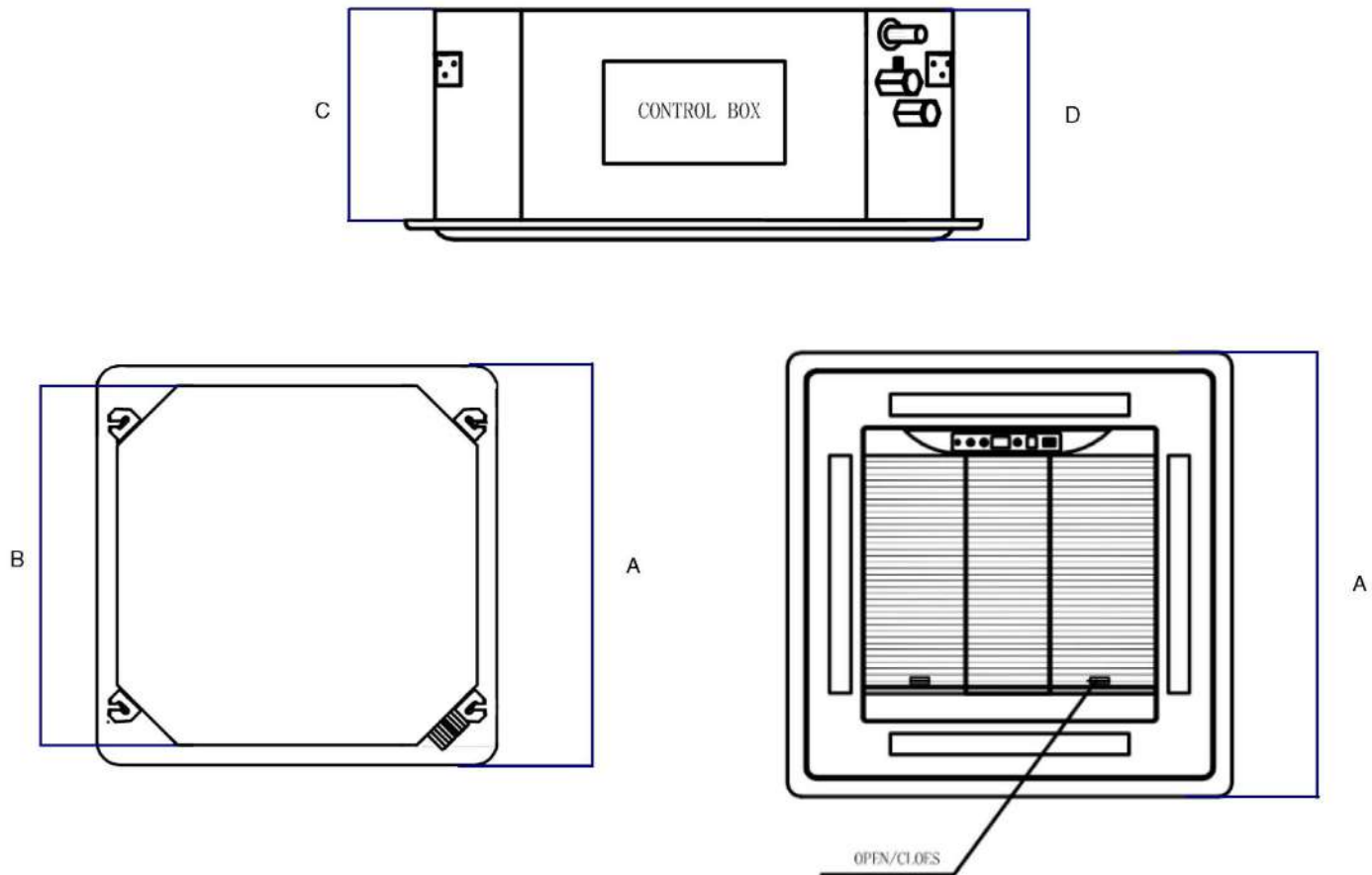
IMPORTANT: *Remote control and thermostat not included* You need to purchase a compatible 120 VAC FCU Thermostat separately.

- Quiet operation
- 3-speed high-efficiency fan, Max 40W
- Built-in water level switch and condensate pump for cooling
- 3/4" FPT Connections with PEX adaptor
- Include a washable air filter
- Copper coil with aluminum wave fins
- Galvanized steel frame
- Pre-drilled holes to make your hanging options easier
- Rate up to 200 PSI
- Electrical: 120VAC
- 1-Year Warranty



MODEL	POWER USAGE	AIRFLOW	NOISE	COOLING	HEATING	FLOW RATE	AREA
2 TON	72 W	250-515 CFM	43db	17K BTU	24.5K BTU	3.8 GPM	900 - 1500 sq ft
4 TON	128 W	500-1000 CFM	45db	34K BTU	45.5K BTU	7 GPM	1500 - 2300 sq ft

2. CEILING FAN COIL DRAWINGS



Model	2T	4T
A	31 1/2"	37 3/8"
B	28 5/16"	32 11/16"
C	11 7/16"	11 13/16"
D	11 13/16"	12 3/16" - 12 13/32"

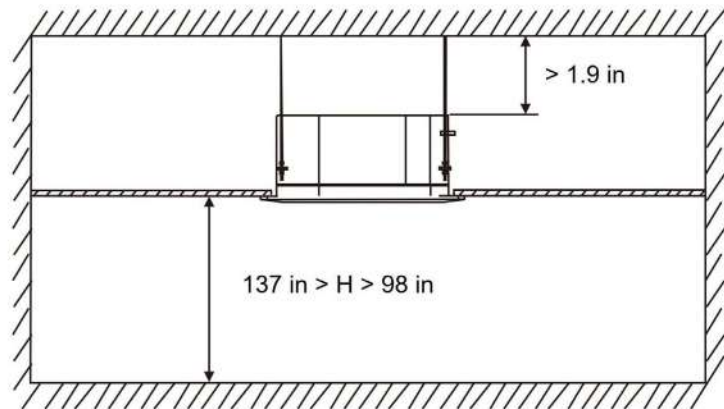
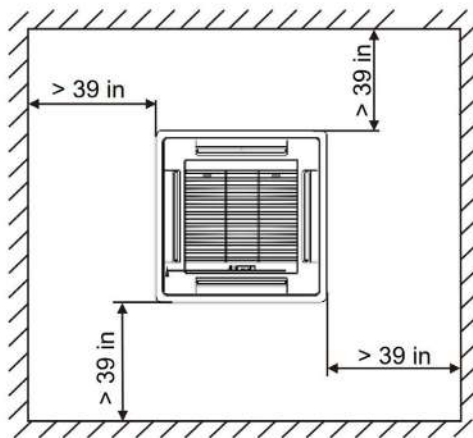
3. INSTALLATION PROCEDURE

3.1 Clearances and positioning

IMPORTANT

- Incorrect positioning or installation of the unit may amplify noise levels and vibrations generated during operation.
- The units can be mounted only horizontally, provided that the correct clearances for positioning are maintained.

Note: Please verify the dimensions of the unit to make sure it's installed the proper way.



3.2 Installation

DANGER:

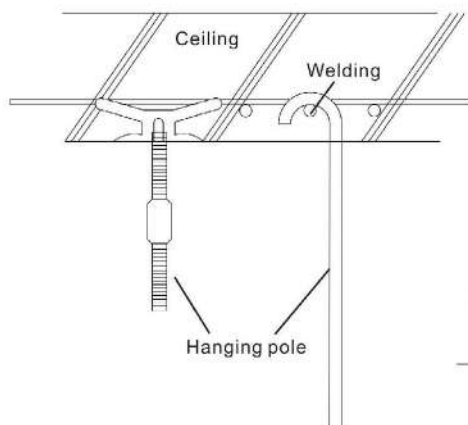
- Installation must only be carried out by qualified technicians, trained to work with fan coil unit system.
- Incorrect installation could lead to unit malfunctioning and a consequent deterioration in performance.
- The unit must be installed according to national or local rules in force at the time Of installation,

1. Select the suspension foundation

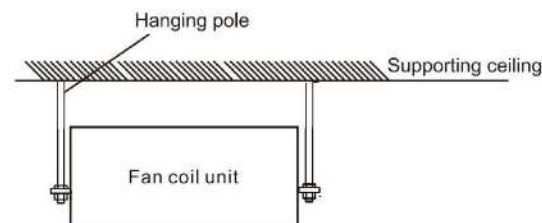
- The suspension foundation must be firm and reliable, and can support the wooden frame and reinforced concrete structure that weigh more than 200kg.
- It is necessary to select the structure able to resist against certain vibration and keep firmness and supporting capacity for a long time as the suspension foundation.
- Before construction, please consult the construction contractor and indoor decoration contractor and obtain their recognition.

2. Hang the master unit to ceiling

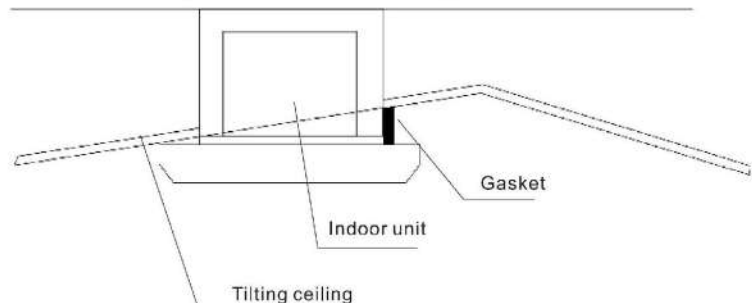
- Mark out the fixing points on the ceiling, either by marking through the drilling in the unit itself. or by referring to the measurements given in dimensions. use expansion screw as the hanging pole, hang the unit to it and then tighten the nut, make sure the unit will not loose.



If this unit body is installed on a tilting ceiling, a gasket should be installed between the ceiling and the air outlet panel, in order to ensure that this unit body is installed on a level surface. As shown in right figure:



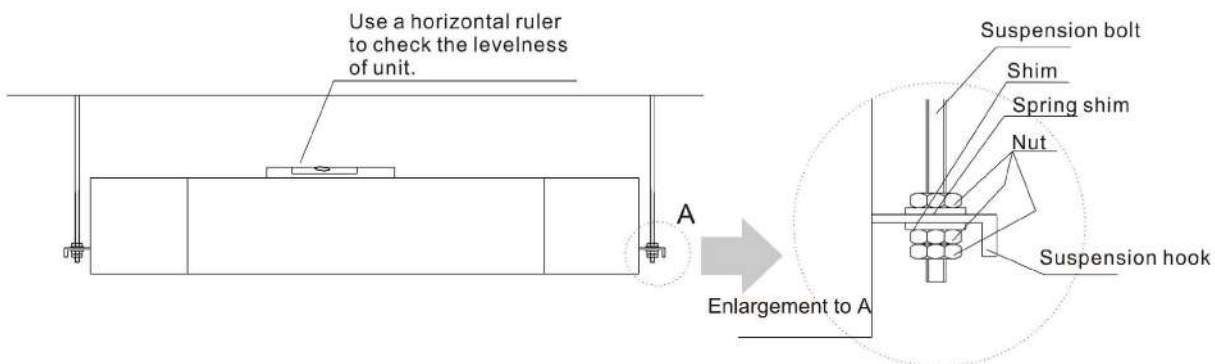
During installation of indoor unit on the ceiling, it is necessary to note that the ceiling must be in level position, and in order to prevent ceiling vibration, it is necessary to reinforce the ceiling.



3.3 Fixing the unit to the ceiling

The indoor master unit should be suspended as shown in the sketch below:

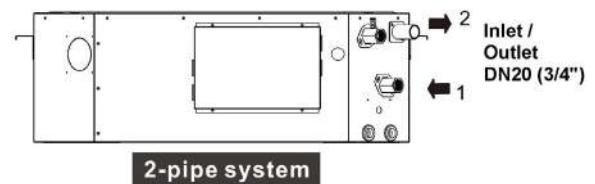
- Adjust the relative position of the suspension hook on the suspension bolt so that the master is in level position in all directions. Check with a level gauge after completion of installation in order to ensure the level of indoor master unit, otherwise water leakage and air leakage may be caused.
- Tighten the bolt and ensure that four hooks are in close contact with the nuts and shims, and the unit is suspended firmly and reliably onto the hooks.
- Ensure that after the master unit is installed, it will not shake or be fixed unsteadily.
- Ensure that the center of the indoor master unit should almost coincide with that of the opening on the ceiling.



3.4 Plumbing Installation

IMPORTANT

The installation **MUST** be done by proper technician to prevent any leaking on the unit.
Connect the unit water pipes inlet and outlet using proper fittings.



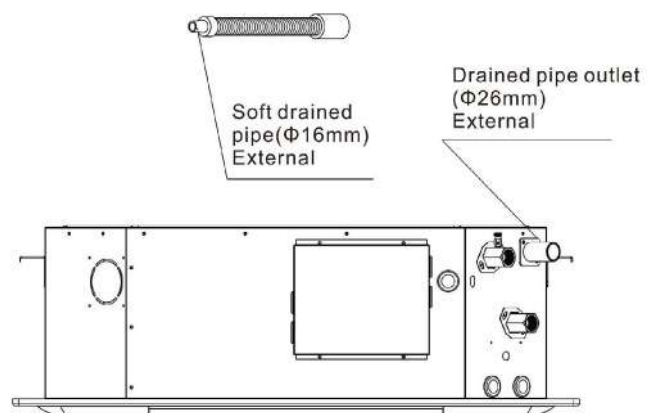
3.5 Condensate drainage system connections

IMPORTANT

Incorrect installation of drainage works may lead to leakage.

The condensation drainage system must be set up with an adequate fall, to ensure that the water escapes properly.

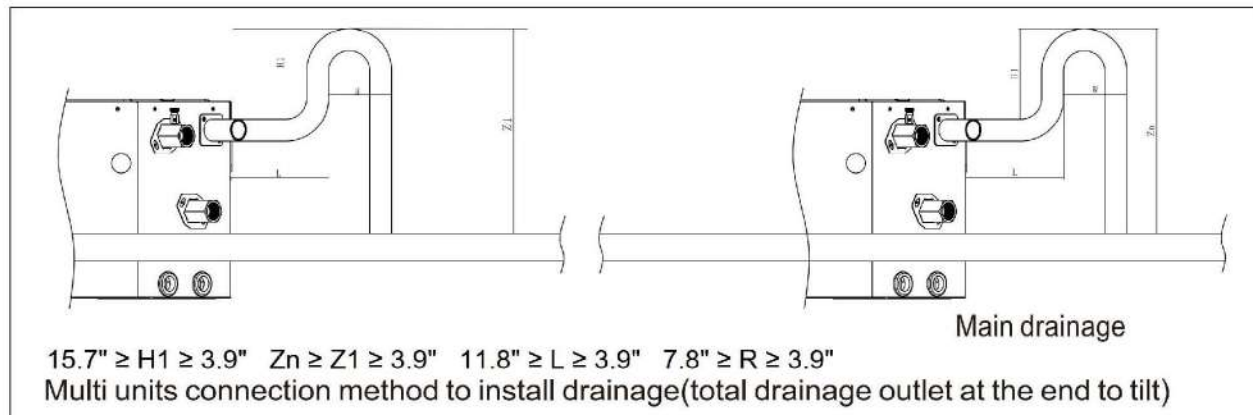
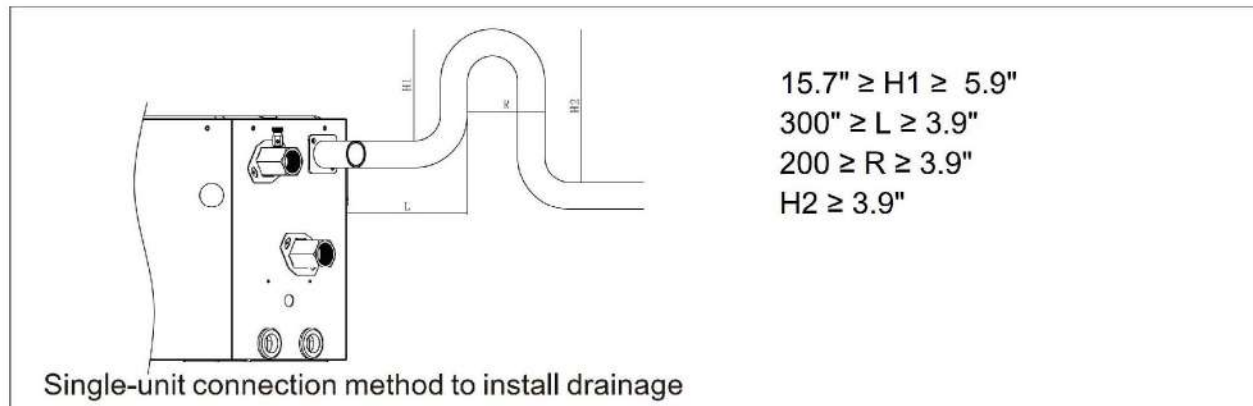
Following are directions for setting up a proper condensation.



3.6 Connection of Draining Pipes

- Use the suitable PVC tube diameter, Use the adhesive joint drainage, and use PVC pipe joints connected family of tape.
- Use insulation material (thickness 10mm or more) to do insulation for all the drain pipe.

Strengthening the various pipe support points, check all piping work link.

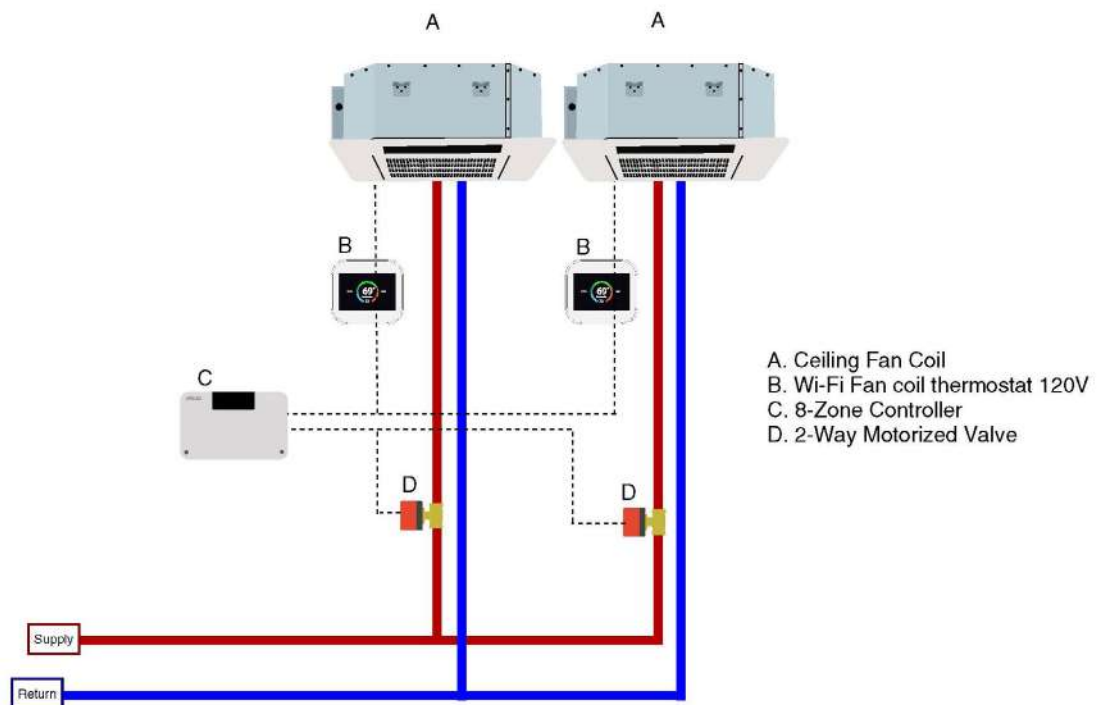
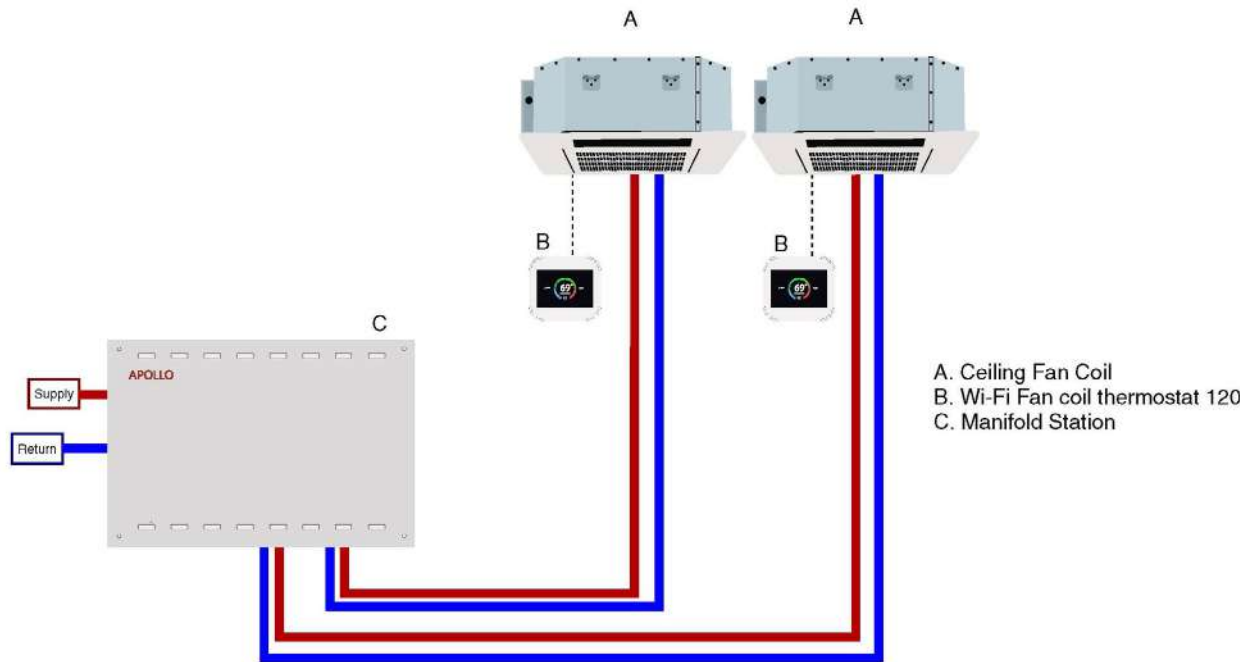


Following installation will cause to leaking:



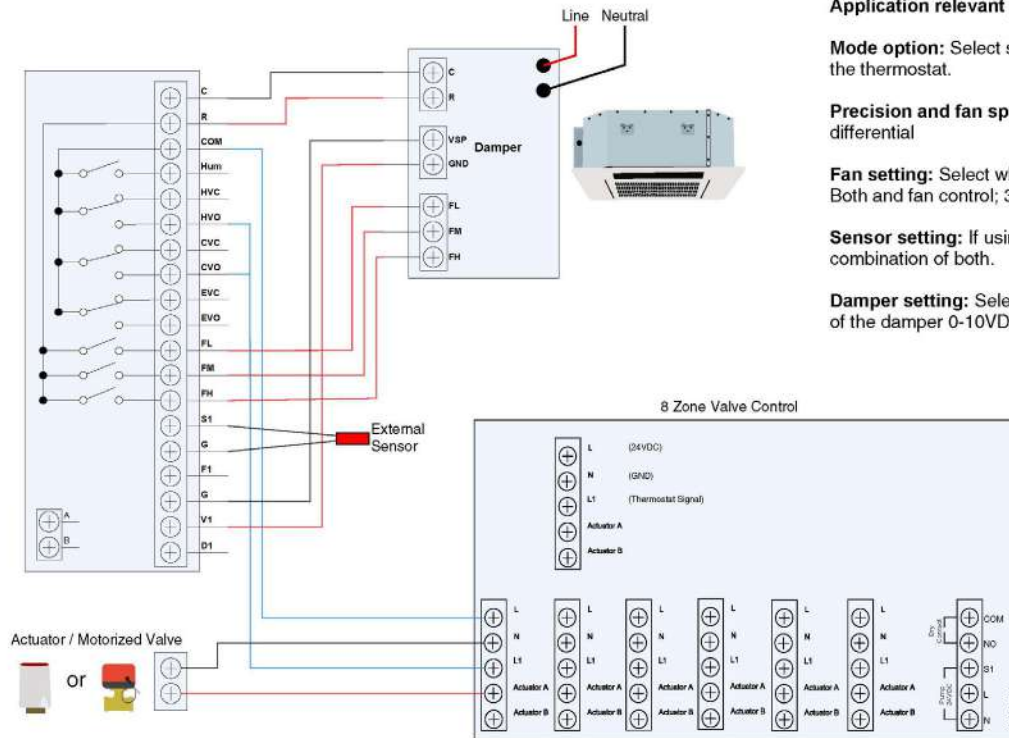
4. PLUMBING SCHEMATICS

Apollo Ceiling Fan Coil Unit Installation



5. WIRING DIAGRAM

APOLLO Ceiling FCU Wiring Schematic



Application relevant parameters:

Mode option: Select specific mode you want to use with the thermostat.

Precision and fan speed: Start differential and Ramp differential

Fan setting: Select whether you want to use Heat, Cool, Both and fan control; 3-speed (120V) or 0-10VDC.

Sensor setting: If using external sensor or a combination of both.

Damper setting: Select the percentage for the opening of the damper 0-10VDC

Notes:

1. All the wiring must be done with AWG #18, as #16 can be too big.

6. CARE AND MAINTENANCE

To get the best efficiency:

- Clean the air filter frequently
A dirty or blocked filter will directly influence the efficiency.
A dirty filter will cause a malfunction of the unit. Clean the filter at least once every two weeks.
- Set a reasonable temperature
The cooling function is more efficient when the difference between the room and outdoor temperature is less than 5 °C. A higher cooling operation can reduce power consumption.
- Avoid other sources of external heat
Use curtains to block direct sunlight from windows during cooling.
Avoid opening doors open unnecessarily.
- Promote air circulation
Allow fresh air circulation into the room occasionally.

6.1 Cleaning

Attention: To clean the unit, the power must be turned off.

6.1.1 Cleaning the air filter

- a. Take out the air filter
- b. Clean it first with a vacuum cleaner and then with water
- c. After cleaning water, dry it. Do not parch it.

6.1.2 Cleaning of the outer part of the unit

- a. Clean it with a clean and soft cloth.
- b. Use a neutral household cleaner.

6.1.3 End of season cleaning (when unit will not be used for a prolonged time)

- a. Switch on the unit, set fan mode, make it work for 3 to 4 hours.
- b. Switch off the unit, cut off the power supply.
- c. Clean air filter and whole unit thoroughly.

6.1.4 Maintenance for season start

- a. Check for blockages in the unit's water inlet and outlet.
- b. Check for blockages in the drainage hose.
- c. Check the proper installation of the air filter.

7. TROUBLE SHOOTING

Issue	Cause	Remedy
Fan does not work when heating	Set temperature is lower than room temperature	Increase set temperature
Fan does not work when cooling	Set temperature is higher than room temperature	Decrease set temperature
Heating or cooling effect is not working properly (cooling wind for heating, hot wind for cooling)	There is air in the water inlet	Open the vent valve
	The pipe inlet filter is blocked	Clean the pipe filter
Insufficient air volume	Air inlet net dirty	Clean the air inlet net
Failure in the selection of wind speed	The internal coil of the motor is damaged	Replace with a new motor
Water leaks outside the unit	The unit interfaces are not in the same level	Re install them at the same level
	Condenser is leaking	Replace with a new condenser
Fan does not work	The switch or motor is damaged	Replace with a new switch or a new motor
Abnormal noise	There is a foreign matter at the fan	Find the foreign matter in the equipment and clean it
Thermostat not turning on	Incorrect wiring or incorrect voltage	Check wiring and measure voltage

APOLLO

APOLLO Heat Pump
info@mbtek.com
888-301-0737



25 Continental Dr Unit C
Wayne NJ 07470
USA