



APOLLO

Wall 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.



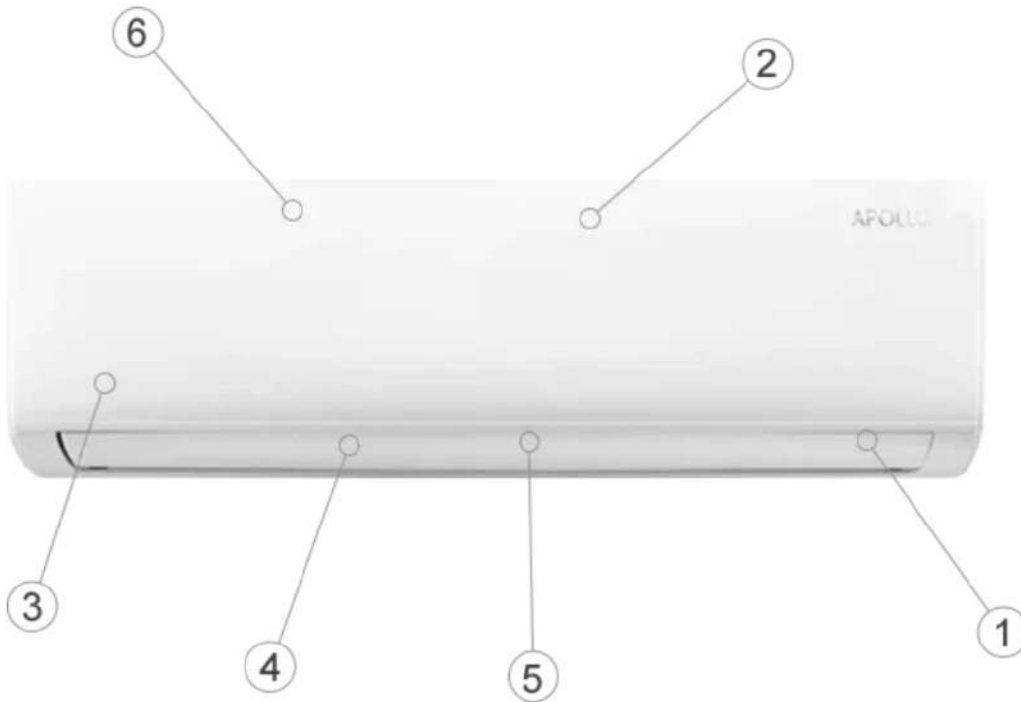
Who Benefits from FCUs?

- 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

Apollo Wall Fan Coil FCU



① Efficient 3-Speed Fan

Customized airflow for comfort.

② Easy Installation

Hassle-free setup with 2 pipes.

③ Built-In Drain System

Say goodbye to condensation worries.

④ Real-Time Monitoring

Enjoy peace with minimal noise.

⑤ Washable Air Filter

Cleaner air, effortlessly maintained.

⑥ Technology You Can Rely On

Long-lasting performance, guaranteed.

1. WALL FAN COIL UNITS SPECS

The best water wall fan coil unit FCU for heating and cooling. Easy to install 2 pipes connections. Great for house, office, and garage.

IMPORTANT: *Remote control and thermostat not included*

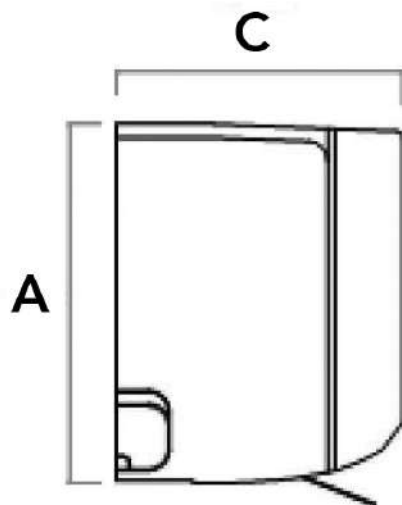
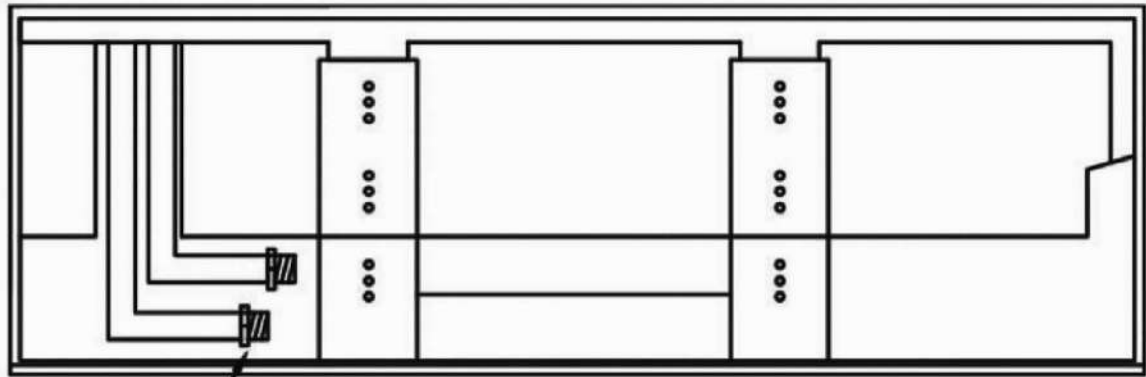
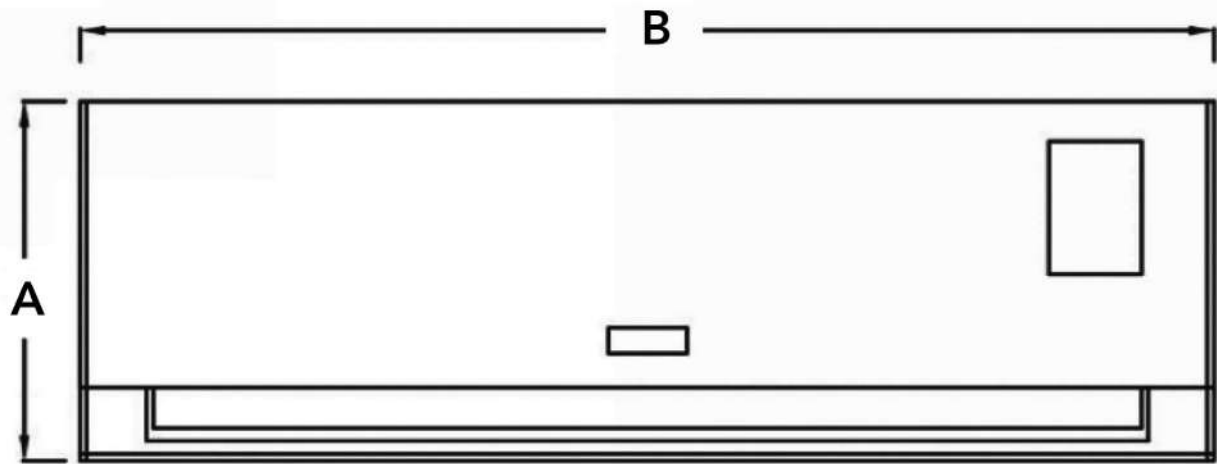
You need to purchase a compatible 24VAC FCU Thermostat separately.

- Quiet operation
- 3-speed high-efficiency fan
- Include PEX 1/2" Compression Adapter
- Condensate drain pan built-in with 7ft of 1/2" drain flex tubing
- Include a washable air filter
- Copper coil with aluminum wave fins
- Galvanized steel frame
- Pre-drilled holes to make your hanging options easier
- 200 PSI-rated
- Power Supply: 120VAC / Control: 24VAC FCU Thermostat
- 1-Year Warranty

MODEL	POWER USAGE	AIRFLOW	NOISE	COOLING	HEATING	WEIGHT	AREA
AP-FCU-18K	33W	225-400 CFM	33-45 db	12k BTU	18.4k BTU	20lb	400 ft2 - 900 ft2
AP-FCU-36K	35W	250-600 CFM	33-47 db	18.5k BTU	31.5k BTU	30lb	800 ft2 - 1300 ft2



2. WALL FAN COIL DRAWINGS



Side view

Model	1.5T	3T
A	10.4"	12.4"
B	33.5"	38.4"
C	8.5"	8.5"

3. INSTALLATION PROCEDURE

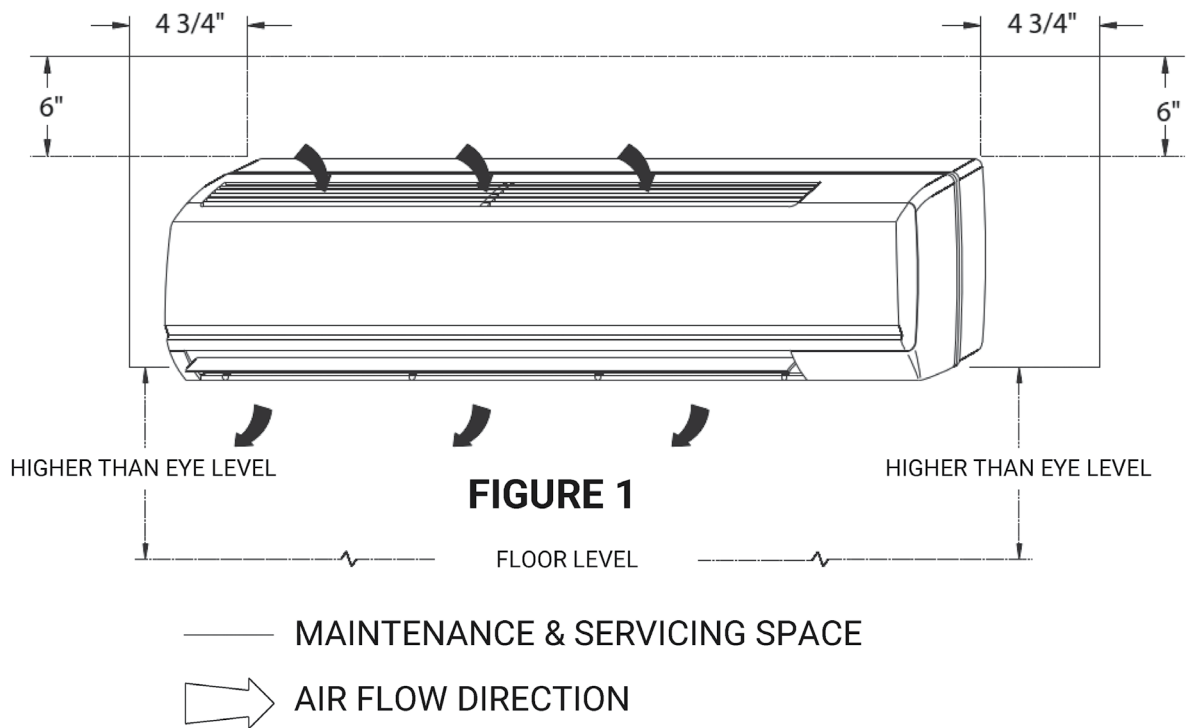
3.1 Location For The Fan Coil Unit

Select the location of the fan coil unit with following consideration:

1. The area in front of air inlet and outlet shall be free from any obstruction, the outlet air should flow out freely.
2. The wall where unit will be mounted should be strong enough to bear the weight and to not produce any noise.
3. Ensure the clearance on every side of the fan coil unit to match picture below. (figure 1)
4. From floor, the height should be more than eye level.

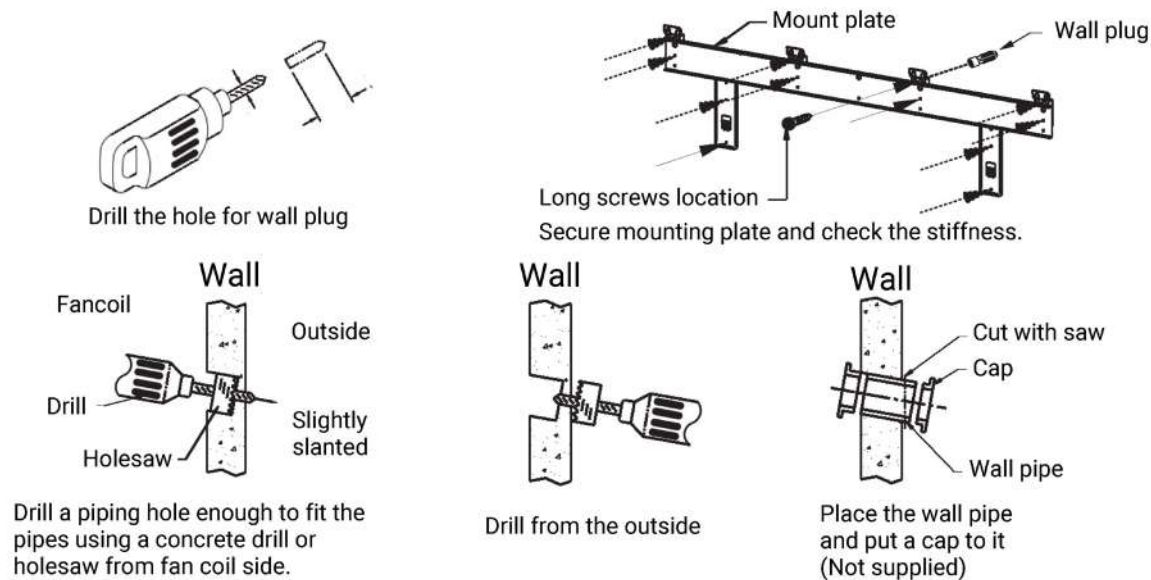


Avoid installing the unit in direct sunlight



3.2 Mounting Plate Installation

1. After selecting a suitable place for installation, place the mounting plate horizontally on the wall.
Make sure the alignment is horizontal by using a pipe level or laser tool.
2. Mount the holding plate to mark the location for the wall plugs and the hole for the piping.
3. Drill a hole for the wall plugs.
4. Insert the wall plugs.
5. Secure the mounting plate and check for stiffness.
6. Drill another hole for the water pipes from either side of the fan coil unit, and make sure that the hole is slightly slanted downward.
7. If the wall is hollow please provide a sleeve for tube assembly to protect the drain line, piping and field connections.

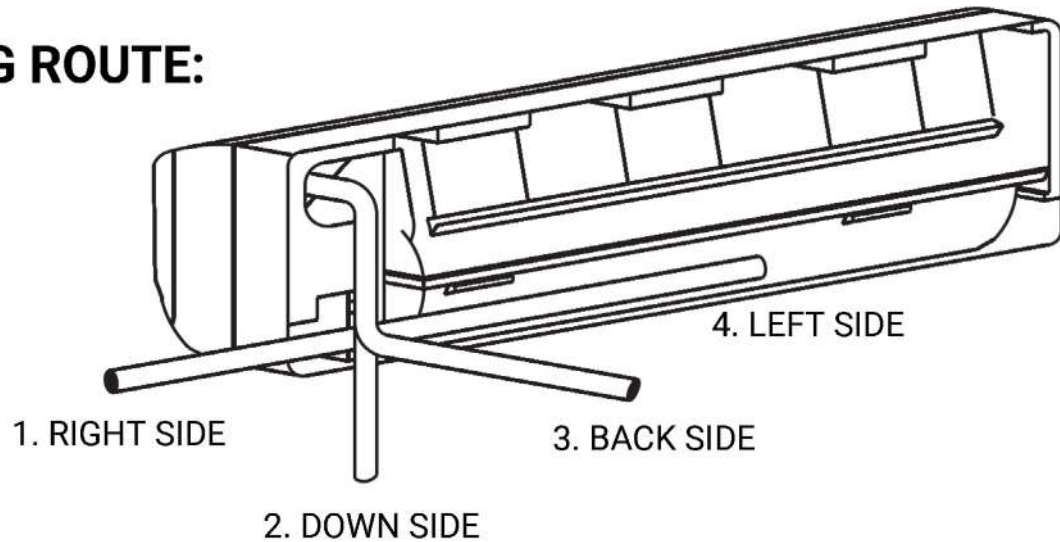


* PIPING AND DRAINAGE OF THE FAN COIL UNIT

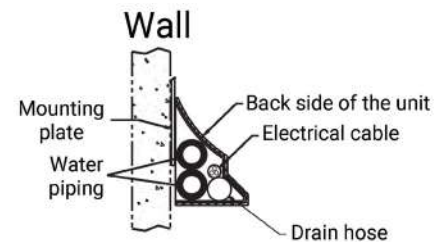
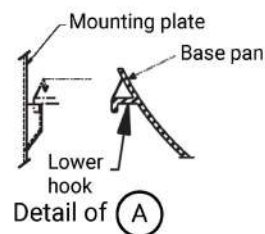
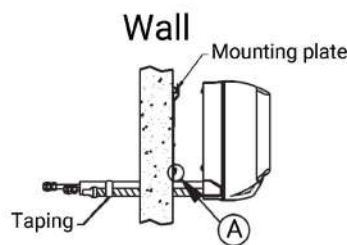
3.3 Piping And Drainage Of The Fan Coil Unit

1. Route the fan coil tubing with drain hose to the hole. There are four possible tubing routes.
For the route 1, 2 and 4 cut the plate to pass the pipe through it, remove any sharp edges left on the base pan.

TUBING ROUTE:



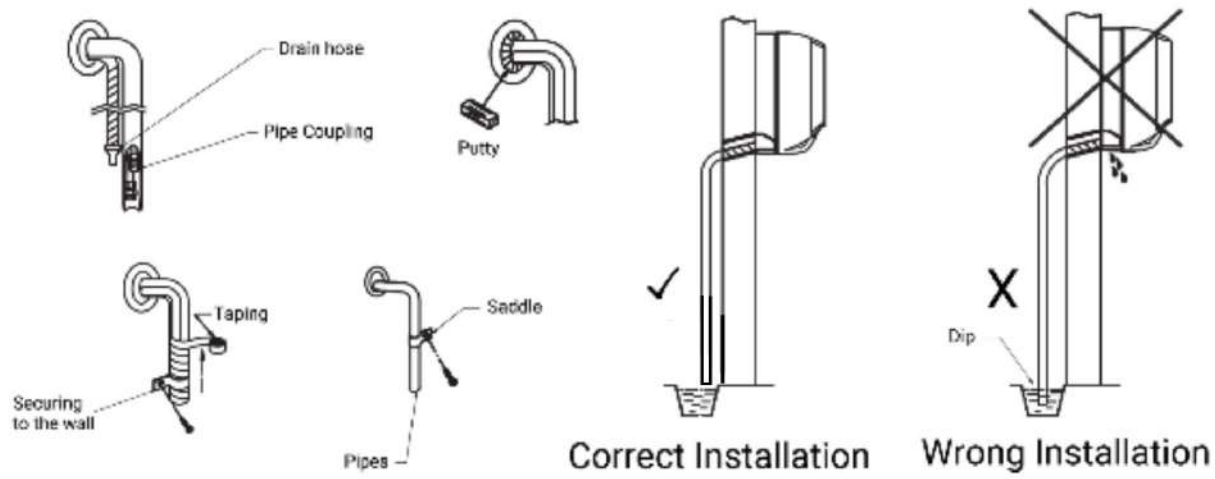
2. Insert the fan coil unit pipings and drain pipe through the hole.
3. Tape the tubing and drain hose.
4. For the horizontal piping, make sure they are laid along the groove at the back of the unit and secure the piping using piping clamps before fixing to the mounting plate.
5. Secure the unit to the mounting plate.



Note: Lay the drain hose as shown above

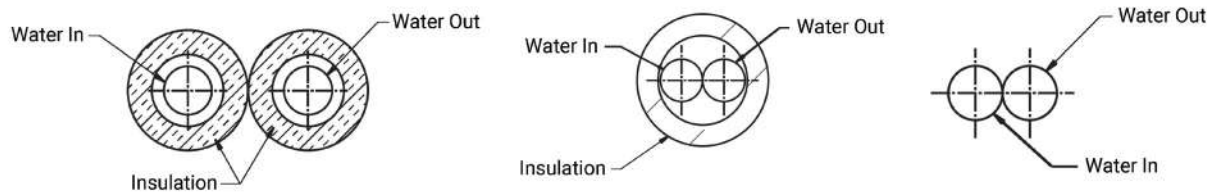
APOLLO WALL FAN COIL UNIT

3.4 Outside Of The Wall



1/4" per foot is recommended as the minimum slope for a condensation pipe to ensure adequate drainage

1. Insert the fan coil unit pipings and drain pipe through the hole.
2. Tape the tubing and drain hose.
3. For the horizontal piping, make sure they are laid along the groove at the back of the unit and secure the piping using piping clamps before fixing to the mounting plate.
4. Secure the unit to the mounting plate.

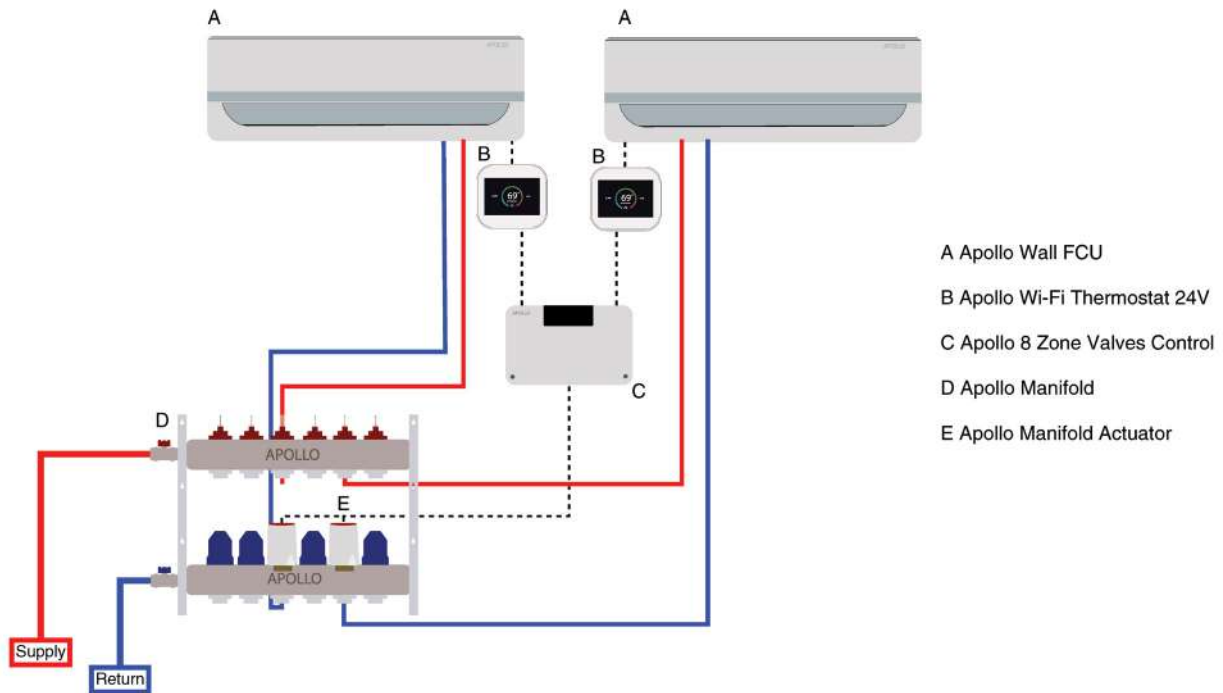


APOLLO WALL FAN COIL UNIT

3.5 Plumbing Schematics

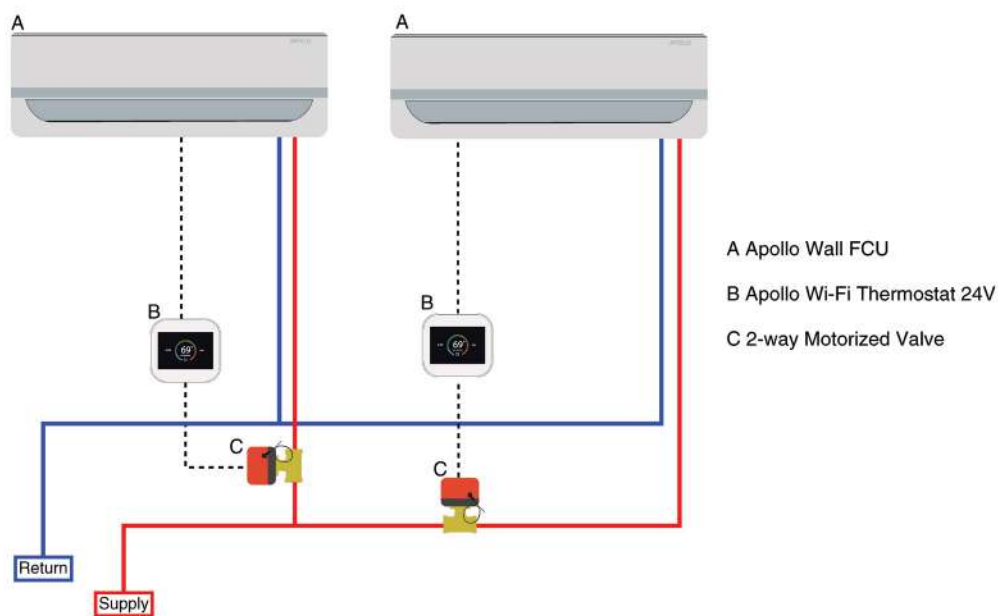
APOLLO Wall Fan Coil Unit Installation

Manifold & Control Box

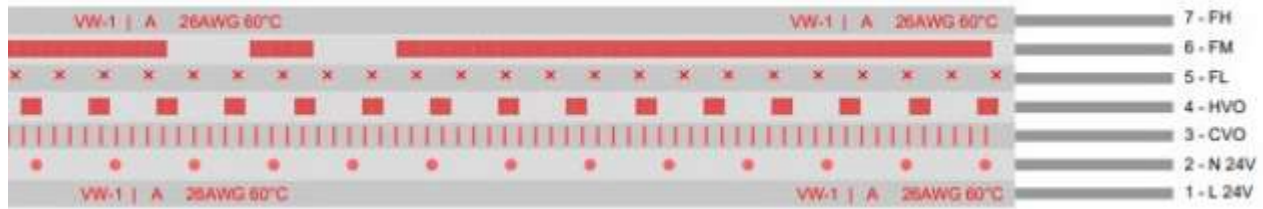


APOLLO Wall Fan Coil Unit Installation

2-Way Valve



4. 2.WALL FAN COIL WIRING



Note: If thermostat doesn't turn on, try reversing the wires. 1 become 7, 2 become 6, and so on.

DIP Switch Selection

Temperature Display Selection

1 2

OFF OFF Fahrenheit display

OFF ON Celcius display

ON ON Turn off the display

Flap Angle Selection

3 4 5

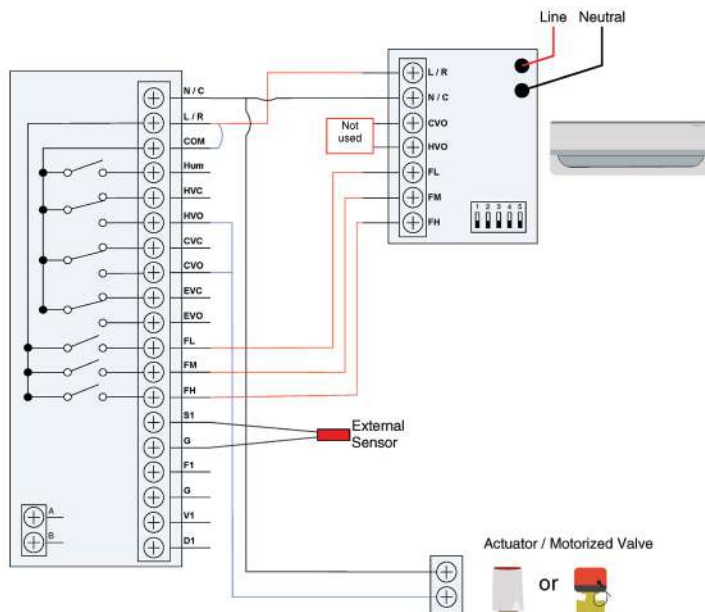
OFF OFF ON Flap angle open 100%

OFF ON OFF Flap angle open 65%

ON OFF OFF Flap angle open 30%

APOLLO WALL FAN COIL UNIT

Thermostat reference wiring schematics



Application relevant parameters:

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

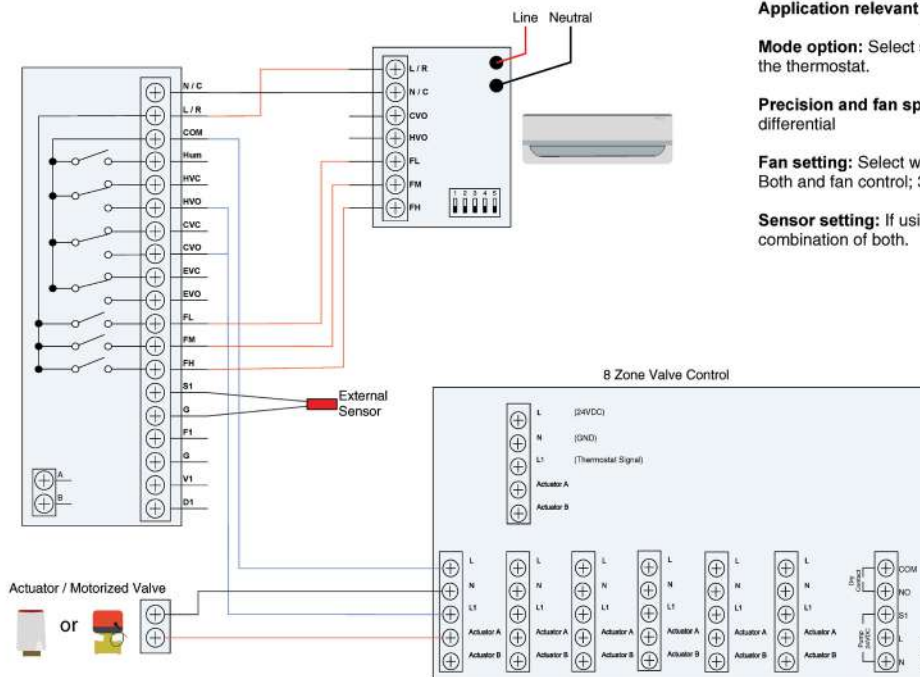
Precision and fan speed: Start differential and Ramp differential

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.

Note:

You can refer to the following wiring, if thermostat doesn't turn on, try reversing the wires (1 becomes 7; 2 becomes 6; and so on.)



Application relevant parameters:

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

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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.

Note:

You can refer to the following wiring, if thermostat doesn't turn on, try reversing the wires (1 becomes 7; 2 becomes 6; and so on.)

5. CLEANING

Caution : For the sake of safety, when cleaning the air conditioner (except for the cleaning of the air outlet), be sure to turn off the power and cut off the power.

Cleaning of indoor unit

1. Use a soft dry cloth to wipe the casing of the indoor unit
2. If the indoor unit casing is particularly dirty, use a cloth dipped in neutral detergent to wipe
 - It is strictly forbidden to use chemically-treated dedusting supplies for cleaning, or leave such supplies next to the machine for a long time.
 - It is strictly forbidden to use light oil, thinner, light powder or other similar solvents for cleaning.

Cleaning of the outlet

Use a soft and dry cloth to wipe around the air outlet and the air deflector.

Cleaning of dust filter

If the dust filter is covered with dust, the cooling / heating effect will be affected. Please clean the dust filter frequently (recommended once every two weeks).

Caution: After cleaning the filter, check carefully before installing the panel. Check whether there is any foreign matter falling into or missing in the fan. Make sure it is correct. Only after installing the panel, you can restart

- It is strictly forbidden for users to disassemble and clean the internal components of the air conditioner by themselves
- If there is a fault, please cut off the power immediately, and then contact a professional for repair.

6. MAINTENANCE

Check before long-term idle

Before preparing to idle the air conditioner for a long time, please do the following:

1. Cleaning indoor unit and air filter
2. Select the "air supply" mode, let the indoor unit run for a period of time to dry the inside.
3. Turn off the power, turn off the circuit breaker, and remove the batteries in the remote control.
4. It should be checked and cleaned regularly inside of the outside unit

Use and check after long-term idle

After long-term idle to prepare for use, please do the following:

1. Check whether the air inlet and air outlet of indoor and outdoor units are blocked, if they are blocked, they should be cleaned up immediately
2. Check the ground wire for damage or disconnection
3. Clean the indoor unit and air filter, otherwise dust may blow out
4. Check whether the outlet of the drain pipe is blocked by garbage, if it is blocked, it should be cleaned up immediately.

7. TROUBLE SHOOTING

Issue	Cause	Remedy
The unit is on but the fan motor is not working	1. No cooling/heating mode selected. 2. The set temperature is lower than room temperature.	1. The heating temperature must be adjusted to above the room temperature. 2. The cooling temperature must be adjusted below the room temperature. 3. To test the unit you can try the Vent mode on the thermostat.
Alarm light flashes or water pump does not work	1. Overvoltage protection. 2. The fuse of the water pump on the board is blown. 3. The room temperature sensor is open. 4. Fan motor overheat protection 5. The fuse of the pump or fan motor is burnt out.	1. Check whether the voltage is normal. 2. Replace the fuse and check for pump power. 3. Check whether the temperature sensor is well connected. 4. Regularly clean the air inlet filter of the air conditioner and way for the motor to cool down. 5. Replace fuse.
The water pump is running, but the fan motor is not working	The water temperature is too low, and it is in the state of preventing cold wind.	The water temperature must be higher than 35°C when the pipe is connected and then the fan can run.
The power indicator is off, the unit is not responding	1. The unit doesn't have power. 2. There is no power to supply the control circuit. 3. The voltage is too high, the controller transformer or varistor is damaged. 4. One of the components on the controller is damaged or the solder joint is loose.	1. Check whether there is electricity in the socket. 2. Check if the control line is broken. 3. Increase power supply. Repair damaged components. 4. Ask a professional technician to repair the unit.
Error E1	Room temperature sensor failure.	Check whether the room temperature is damaged.
Error E2	Coil sensor failure.	Check if the coil sensor is damaged.
Error E3	Motor Feedback Fault	Check whether the motor feedback line is damaged.
Error EA	Anti-boiler temperature sensor failure.	Check whether the anti-boiler sensor is damaged.
Error EH	High temperature protection.	Automatically return to normal when the water temperature is lower than 70°C

8. TECHNICAL PARAMETERS

Model number		1.5 TON	3 TON
Air flow rate(CFM)	High	400	647
	Medium	294	560
	Low	224	500
Cooling capacity(BTU)	High	13.6K	18.8K
	Medium	10.2K	13.9K
	Low	8.2K	11.9K
Heating capacity(w/h)	High	20.5K	25.6K
	Medium	17.4K	20.5K
	Low	15.0K	18.8K
Water flow rate GPM		650	3.5
Power(w)		18	45
Weight(lb)		21.4	30.2

APOLLO WALL FAN COIL UNIT

MODEL	WATER INLET TEMP. °F	WATER TEMP. DIFF. °F	WATER FLOW GPM	Cooling Capacity K BTU / Air inlet temp. °F						
				70 °F	73.5 °F	77 °F	80.5 °F	84 °F	88 °F	91 °F
				52 %	55 %	56 %	46 %	48 %	50 %	52 %
1.5 Ton	41	5.4	6.7	10.9	14.3	18.3	18.3	22.5	27	31.9
		9	3.3	7.6	10.7	14.4	14.7	18.7	23	27.9
		12.6	1.7	5.2	6.9	10.2	11	14.6	18.9	23.7
		16.2	1	3.5	4.7	6.4	7.9	10.4	14.4	19
	44.6	5.4	5.7	8.4	11.6	15.3	15.4	19.4	24	28.9
		9	2.7	5.9	8.1	11.4	12.1	15.8	20	24.7
		12.6	1.4	3.7	5.3	7.2	8.8	11.7	15.8	20.4
		16.2	0.8	2.5	3.5	4.9	6.5	8.2	11.4	15.7
	48.2	5.4	4.7	6.5	8.4	12.2	12.7	16.4	20.8	25.6
		9	2.1	4.3	6	8.5	9.5	12.8	16.8	21.3
		12.6	1.1	2.5	3.8	5.5	7.1	9.2	12.6	17
		16.2	0.6	1.7	2.5	3.5	5	6.6	8.6	12.4
	51.8	5.4	3.7	5	6.5	9.3	9.9	13.3	17.4	22.2
		9	1.7	2.8	4.4	6.2	7.7	10	13.6	18
		12.6	0.9	0	2.5	4	5.6	7.3	9.7	13.5
		16.2	0.4	0	0.8	2.5	3.6	5.2	6.8	9.2
	55.4	5.4	3	3.4	5	6.6	8	10.4	14.1	18.6
		9	1.4	0	2.9	4.5	6.3	7.8	10.5	14.6
		12.6	0.7	0	1.6	2.5	4.1	5.7	7.5	10.2
		16.2	0.3	0	0.8	1.7	2.5	3.7	5.3	7
3 Ton	41	5.4	13.1	21.3	28	35.7	35.6	43.9	52.7	62.2
		9	6.4	14.9	20.8	28.1	28.8	36.5	45	54.5
		12.6	3.4	10.1	13.5	19.9	21.5	28.5	36.9	46.3
		16.2	1.9	6.7	9.2	12.5	15.5	20.3	28	37
	44.6	5.4	11.1	16.4	22.6	29.9	30.1	38	46.8	56.3
		9	5.2	11.5	15.7	22.2	23.6	30.8	39	48.2
		12.6	2.7	7.3	10.4	14.1	17.2	22.9	30.8	39.8
		16.2	1.6	5	6.7	9.5	12.7	16.1	22.2	30.6
	48.2	5.4	9.1	12.7	16.5	23.9	24.7	32	40.6	50.1
		9	4.1	8.5	11.8	16.6	18.6	25	32.9	41.7
		12.6	2.2	4.8	7.5	10.7	13.8	18	24.7	33.2
		16.2	1.2	3.3	5	6.8	9.8	12.9	16.7	24.1
	51.8	5.4	7.2	9.8	12.7	18.2	19.4	26	34	43.4
		9	3.3	5.4	8.6	12.2	15.1	19.4	26.6	35.1
		12.6	1.7	0	4.8	7.7	10.9	14.2	19	26.4
		16.2	0.9	0	1.6	5	7	10.1	13.4	17.9
	55.4	5.4	5.8	6.7	9.8	12.9	15.6	20.3	27.5	36.3
		9	2.7	0	5.6	8.8	12.2	15.3	20.5	28.4
		12.6	1.3	0	3.1	4.9	8	11.2	14.7	19.9
		16.2	0.6	0	1.6	3.3	5	7.3	10.4	13.7

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