



APOLLO

Floor 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.

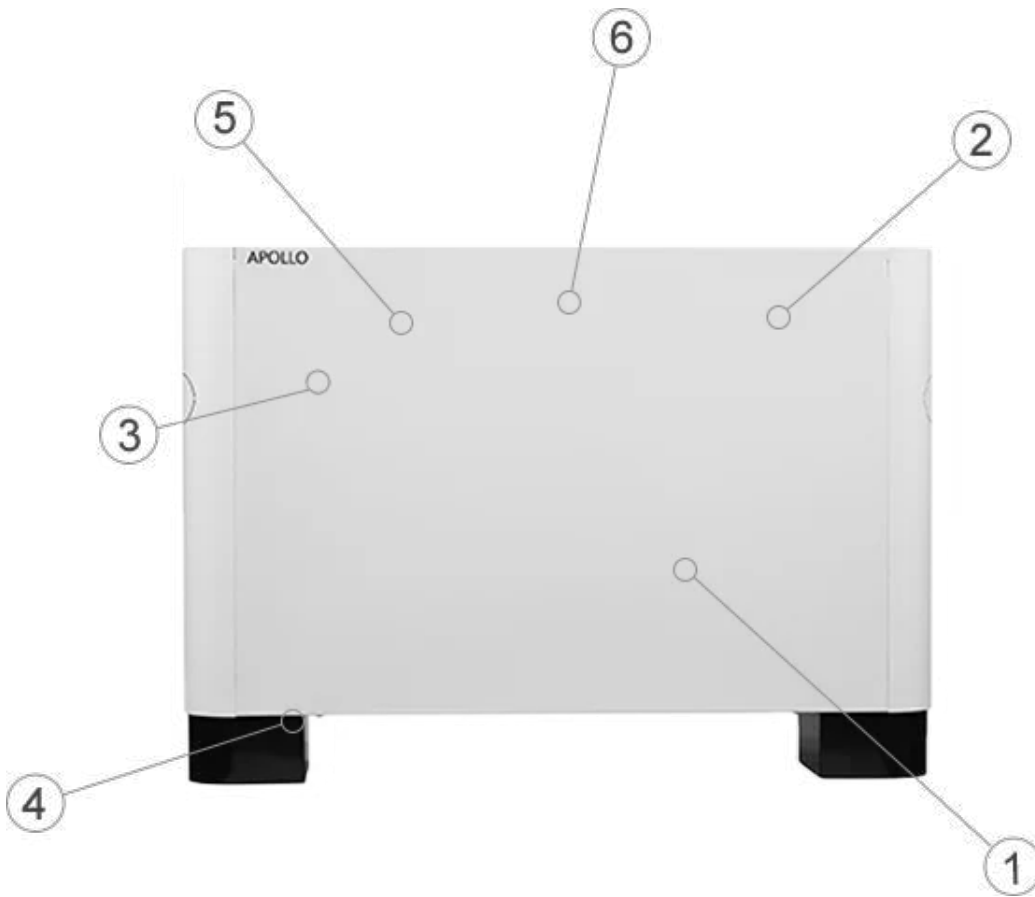
Who Benefits from FCUs?

- 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

Floor Fan Coil FCU



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| <p>① Efficient 3-Speed Fan
Customized airflow for comfort.</p> | <p>④ Quiet Operation
Enjoy peace with minimal noise.</p> |
| <p>② Easy Installation
Hassle-free setup with 2 pipes.</p> | <p>⑤ Washable Air Filter
Cleaner air, effortlessly maintained.</p> |
| <p>③ Built-In Drain System
Say goodbye to condensation worries.</p> | <p>⑥ Durable Design
Long-lasting performance, guaranteed. Water resistant.</p> |

1. FLOOR FAN COIL UNITS SPECS

Simply the best floor fan coil on the market. Designed in the USA. The ultra-thin exposed fan coil unit is easy to install and operate quietly. Making it ideal for home use.

The superior performance of APOLLO Floor Fan Coil allows it to be favored by those seeking quality as well as in harsh environments, like bathrooms. Its enhanced performance boosts the unit's longevity, and its higher-grade motor is more water-resistant than standard fan coils, resulting in an increased service life.

The APOLLO Floor Fan Coil is an ideal solution for heating and cooling. Installation is straightforward, requiring only two pipe connections. This unit is perfect for homes, offices, and garages. The fan motor is DC High Efficiency and speed control is done with our FCU Thermostat 120V with 0-10VDC for fan speed. This energy-efficient motor ensures the fan runs quietly, reducing power consumption and operating costs.

IMPORTANT: *Remote control and thermostat not included*

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

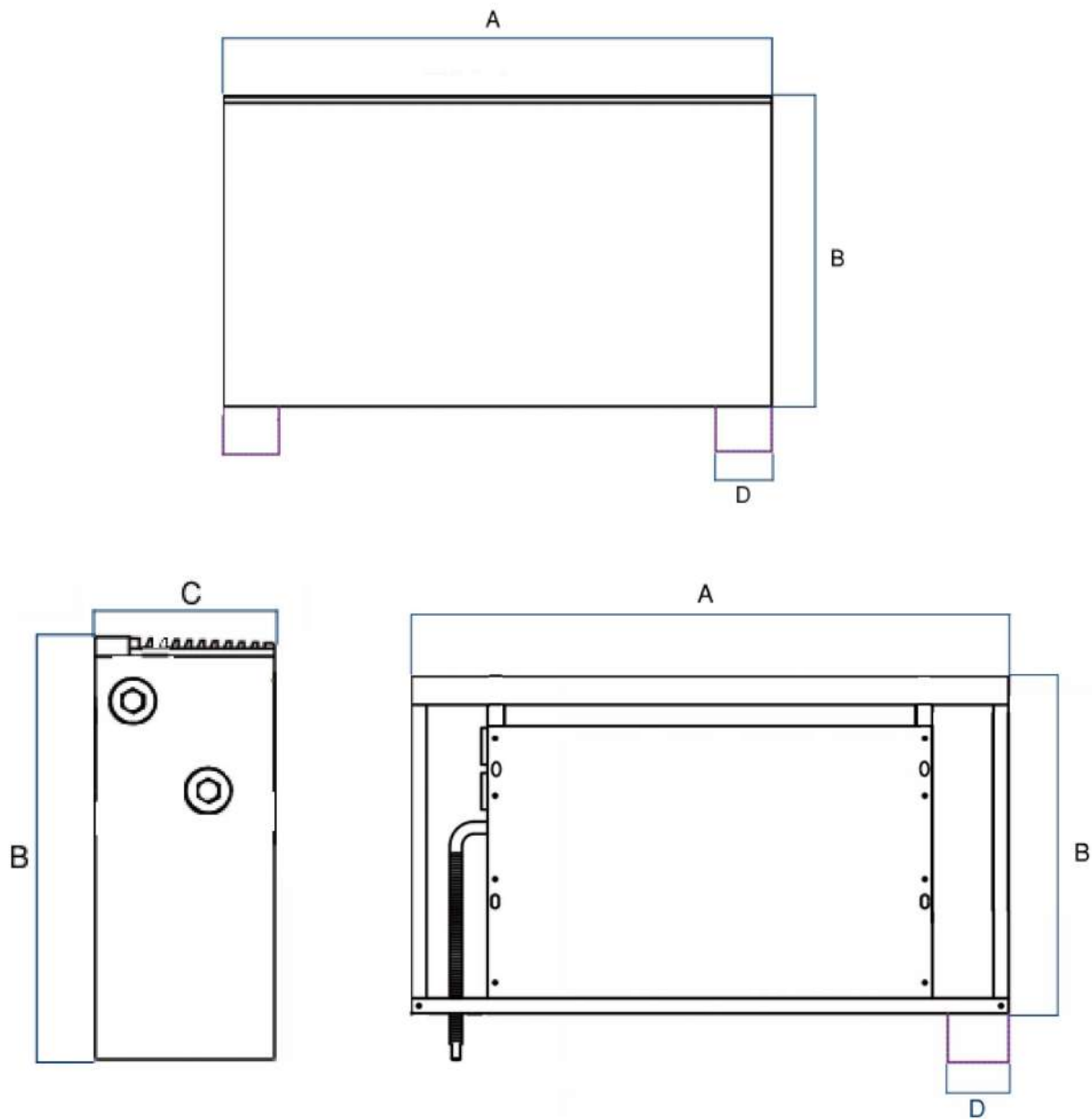
Low noise / Quiet operation

- 3-speed high-efficiency fan controlled with 24 V
- 1/2" NPT Connections
- Include a washable air filter
- Copper coil with aluminum wave fins
- Galvanized steel frame
- 200 PSI-rated
- Power Supply: 120VAC
- Control: 24VAC or 0-10VDC
- 1-Year Warranty
- Pre-drilled holes to make your hanging options easier



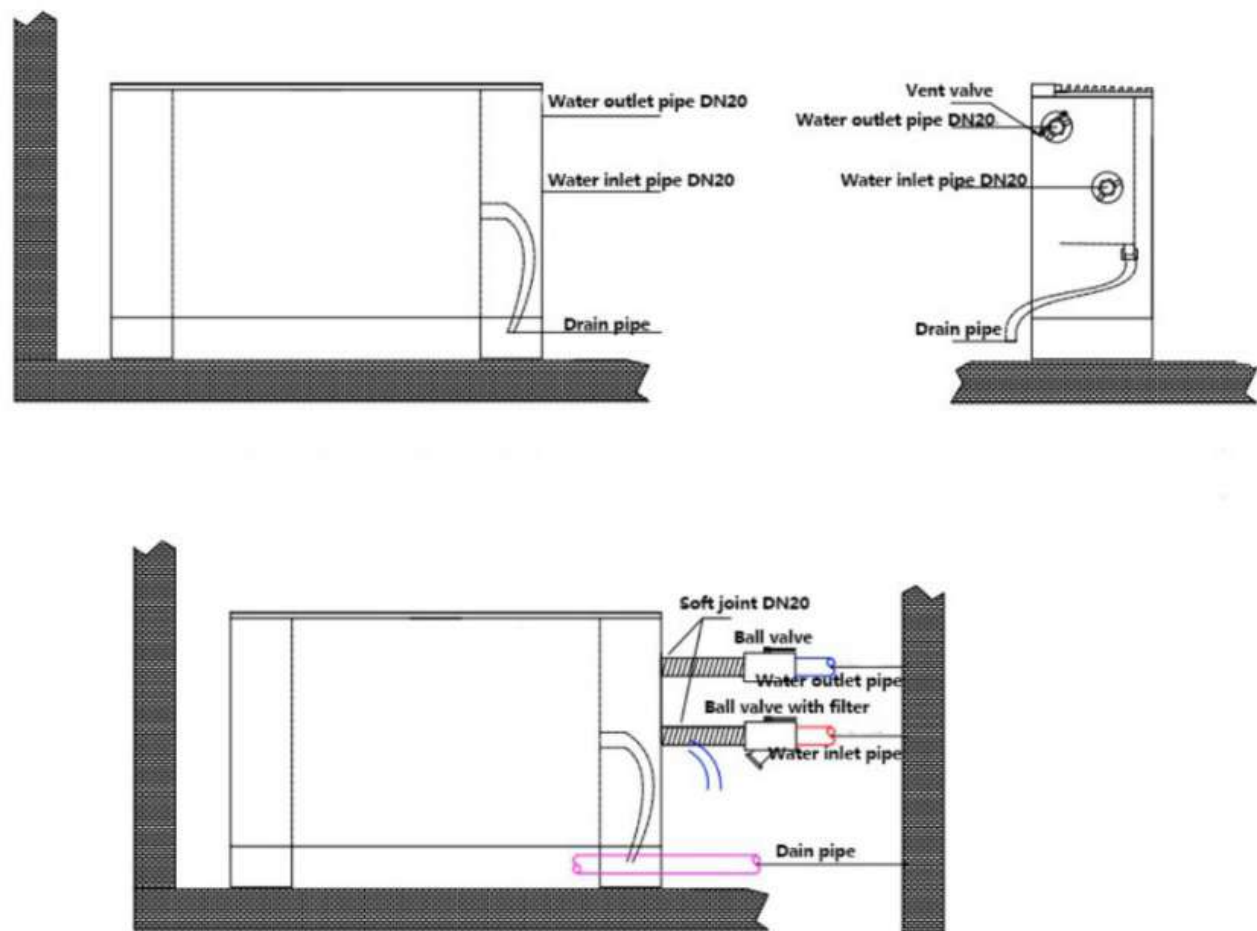
MODEL	AIRFLOW	NOISE	COOLING	HEATING	WEIGHT	SIZE	AREA
1.5 TON	300 CFM	30-45 db	9k BTU	13.5k BTU	33.2 lb	35 1/2" x 24 13/16" x 7 1/16"	450 - 675 sq ft
3 TON	600 CFM	35-50 db	18k BTU	27k BTU	45.4 lb	49 9/32" x 24 13/16" x 7 1/16"	900 - 1350 sq ft

2. FLOOR FAN COIL DRAWINGS



Model	1.5T	3T	Tolerances
A	35 1/2"	49 9/32"	± 3/16" (5mm)
B	7 1/16"	7 1/16"	± 3/16" (5mm)
C	24 13/16"	24 13/16"	± 5/32" (4mm)
D	3 1/8"	3 1/8"	± 1/16" (1.5mm)

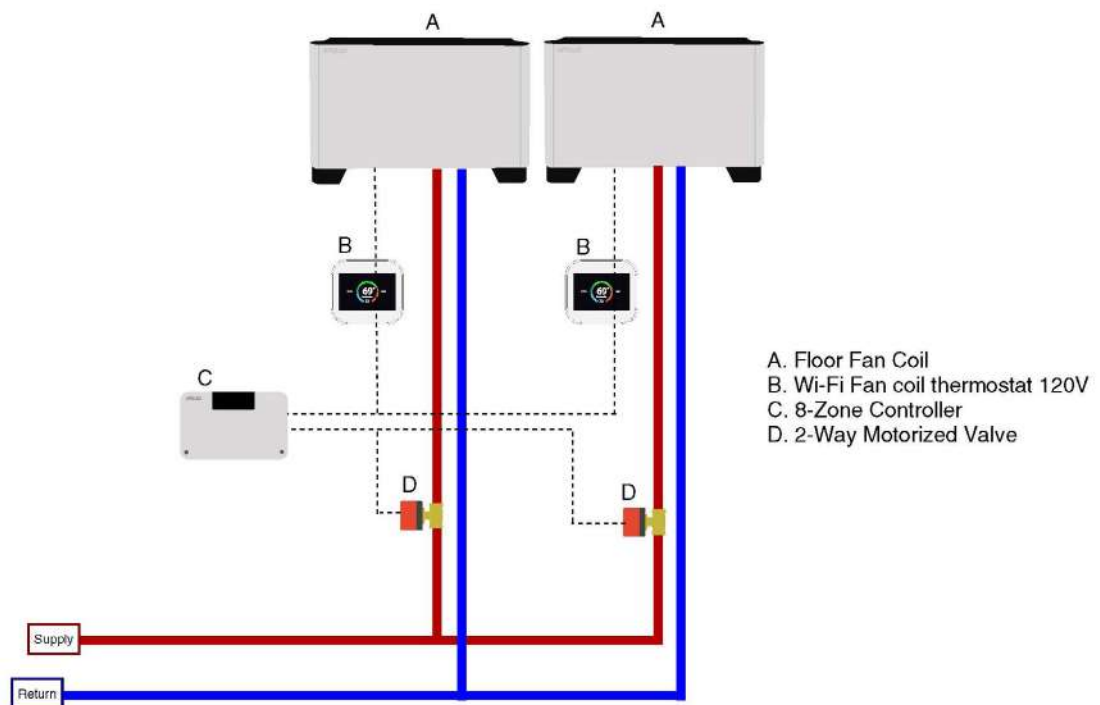
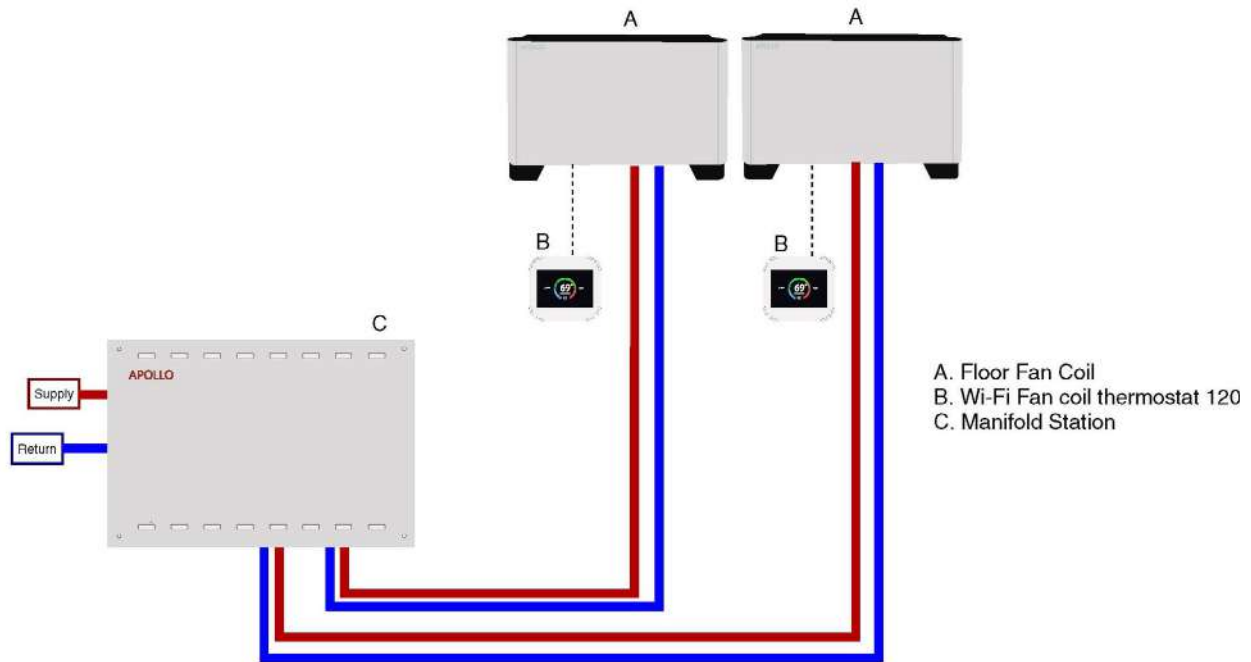
3. INSTALLATION PROCEDURE



- Equipment can be installed with the floor support (aka. legs) or can be mounted in the wall using a wall support (anchors, bolts and nuts, not included)
- The condensate pipe should be slightly lower than the drain pan, and should not have dead bends to ensure that condensated water drains smoothly.
- If the fan coil will be used for cooling. Water inlet and outlet pipes as well as condensation pipes must be properly insulated.
- Ensure that the diameter of the inlet and outlet pipes is bigger than the inner diameter of the machine interface.
- Each floor fan coil requires their own separated control thermostat. Multiple machines cannot share one thermostat

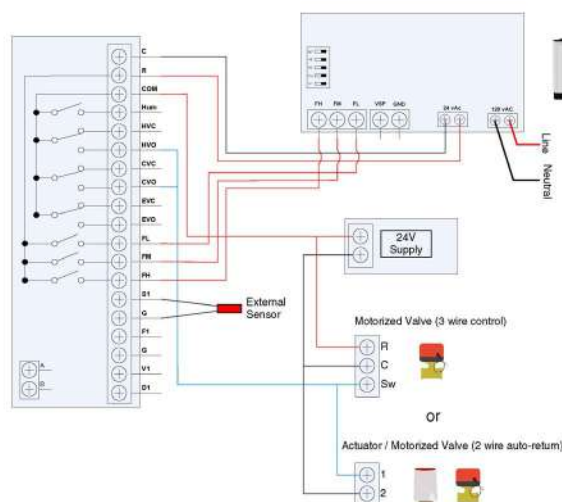
4. PLUMBING SCHEMATICS

Apollo Floor Fan Coil Unit Installation



5. WIRING DIAGRAM

APOLLO Floor FCU Wiring Schematic 24V Thermostat



Application relevant parameters:

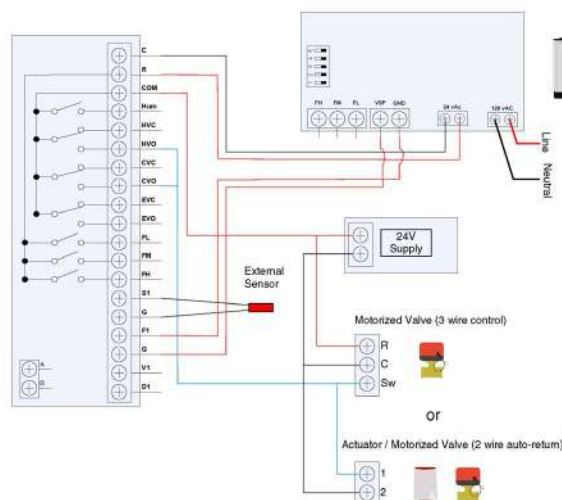
Mode option: Select specific mode you want to use with the thermostat.

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).

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

APOLLO Floor FCU Wiring Schematic 24V Thermostat



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).

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

Notes:

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

2. Using 120-240VAC Thermostat, terminal COM and valves can be isolated to handle low voltage (CVO, CVC, HVO, HVC, EVO, EVC, HUM).

SPEED MODEL	STATIC PRESSURE	AIR FLOW			DIP SWITCH # (SET TO ON)
		HIGH	MID	LOW	
		RPM			
1.5T Unit	12Pa	790	615	450	Only 3
	30Pa	940	735	515	1 & 3
	50Pa	1100	865	585	2 & 3
3T Unit	12Pa	975	760	540	1, 3 & 4
	30Pa	1090	860	595	2, 3 & 4
	50Pa	1210	940	640	1, 2, 3 & 4

6. CARE AND MAINTENANCE

- a. To adjust the three- gear adjustment switch of the unit or any other gear, the machine should be turned on first.
- b. If the unit presents difficulties to start. Check whether the power supply is normal, whether the wind wheel is in contact with the turbine, and whether other substances are sucked into the wind wheel.
- c. In summer, the temperature of cold water supplied by the unit should not be lower than 44 °F. In winter, the temperature of hot water supplied should not be higher than 176 °F. Also, the water used in the system must be softened considering the local water quality.
- d. The maximum allowable working pressure of the unit is 200 PSI.
- e. To prevent impurities from clogging the pipeline and affect usage. The filter on the inlet pipe should be cleaned regularly. Before cleaning, close the pipeline valve.
- f. The air inlet of the unit should be cleaned regularly to prevent dust from blocking the air inlet and affecting the motor lifetime.
- g. Avoid using the equipment in a humid environment to prevent short circuits.
- h. Before winter, drain all the water from the unit to avoid freezing and cracking of the internal condenser.
- i. While the unit is out of service, the power plug should be unplugged to prevent damages to the computer board by lightning strikes
- j. For repairs and maintenance, cut off the power supply.

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
Fan turns for a few seconds and then makes a beeping noise	Dip switch configuration	Check the 1-2 dip switch, 3-speed should be 1 ON 2 OFF, 0-10VDC 1 OFF 2 ON

APOLLO

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