

风 机 盘 管

Fan Coil Unit

使用说明书

Operating Instruction
Manual

警告

Warning

1. 风机盘管的安装和调试必须由专业人员按照本手册的要求进行。否则可能造成漏水、触电、火灾等事故。
1. The installation and commissioning of the fan coil unit must be Carried out by professional personnel in accordance with the requirements of this manual. Otherwise, it may cause accidents such as water leakage, electric shock and fire, etc.
2. 必须按照接线图进行接线，否则可能会烧毁电机。
2. It must be wired according to the wiring diagram, otherwise the motor may be burned.
3. 必须确保风机盘管良好接地，以免因绝缘故障造成人身伤害和经济损失。
3. The unit must be well grounded to prevent personal injury and financial loss due to insulation failure

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一、机组使用范围 Scope of Application

产品执行标准：GB/T19232-2019

Product implementation standards: GB/T19232-2019

(1) 机组供冷时进水温度建议不低于5℃，否则可能会引起机组凝露；供热时进水温度不应高于80℃（常规60℃），否则可能引起机组换热器的铜管腐蚀。

(1) In cooling mode, proposed water inlet temperature is not less than 5℃, otherwise, it may cause condensation; In heating mode, proposed water inlet temperature should not be higher than 80℃ (commonly is 60℃), otherwise it may cause corrosion of the copper heat exchanger.

(2) 建议机组的运行环境温度，供冷时：16-40℃，供热时：10-35℃；空气相对湿度≤95%。

(2) Recommended operating temperature of the unit: in cooling mode: 16-40℃; in heating mode: 10-35℃; air relative humidity ≤ 95%.

(3) 本产品只作为舒适性空调使用，不能安装在有腐蚀性、可燃性气体或有油雾（如厨房）等有特殊要求的场所，否则会造成机组不能正常运行或缩短机组使用寿命。

This product is only used as a comfortable air conditioner, can not be installed in a corrosive, flammable gas or fog (such as kitchen) and other places with special requirements. otherwise , it may make the unit not run normally or reduce service life of the unit.

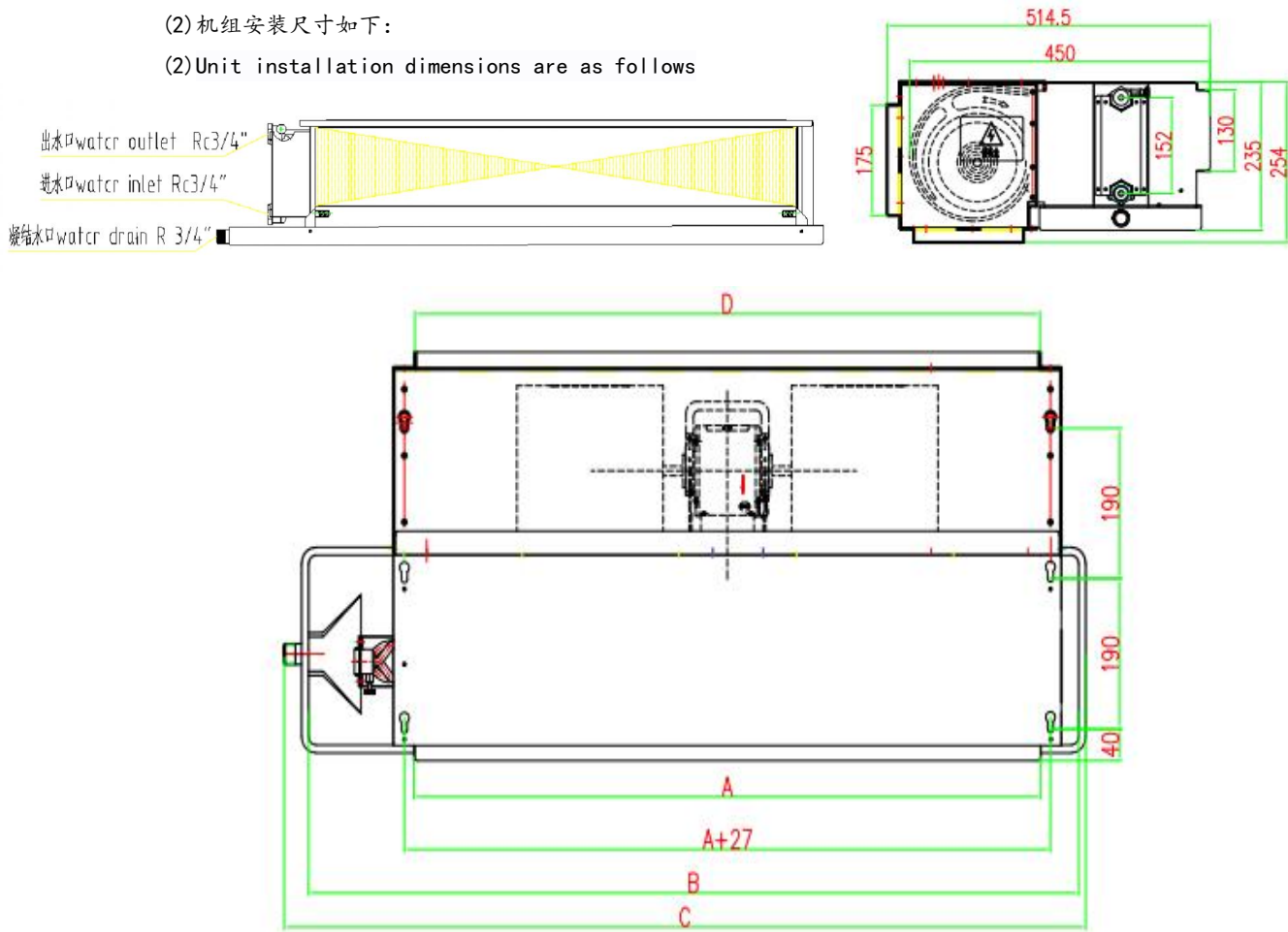
二、安装说明 Installation Instructions

(1) 机组应由熟悉该产品及当地相关法律法规规定的专业人员安装

(1) The unit should be installed by personnel who is familiar with the product or professionals stipulated by local laws and regulations.

(2) 机组安装尺寸如下:

(2) Unit installation dimensions are as follows



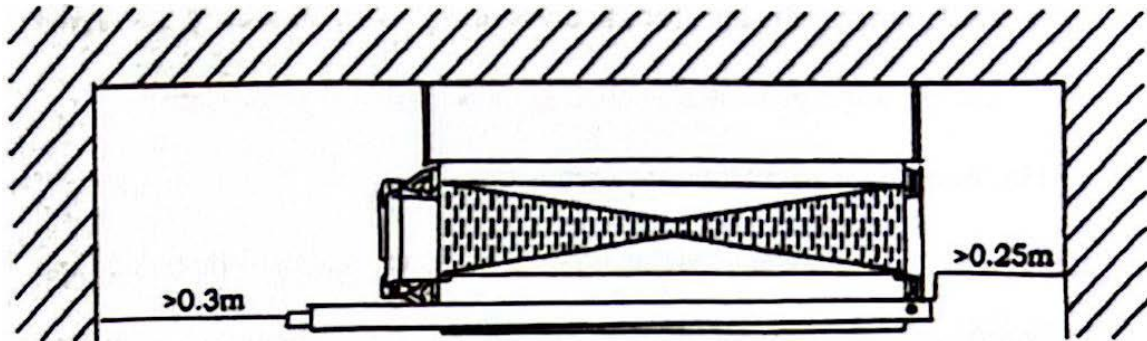
型号 MODEL	A	B	C	D	No. of motor
FP-34WA	460	71	750	460	1
FP-51WA	580	810	850	580	2
FP-68WA	650	910	950	650	2
FP-85WA	780	1010	1050	780	2
FP-102WA	900	1110	1150	900	2
FP-136WA	1100	1310	1350	1100	3
FP-170WA	1360	1610	1650	1360	4
FP-204WA	1560	1810	1850	1560	4
FP-238WA	1760	2010	2050	1760	4

(3) 机组必须安装牢固，安装使用吊杆螺栓时，检查安装位置是否可以承受机组的 4 倍重量，若不保险，在安装机组前应加固，机组重量以铭牌标称值为准。

(3) The unit must be installed firmly. When using boom bolts during installation, check to see if the installation location can withstand 4 times of weight of the unit. If not sure, reinforce it before installation. Unit weight is subject to the nominal value on the nameplate.

(4) 机组周围保留足够的安装维护空间（见下示意图）：

(4) Keep enough installation and maintenance space around the unit (see below)



(5) 风机盘管吊装时应确保水平位置，吊装只允许承受本身重量，不得承受风管、水管及其他物体的外力。

(5) When the unit is installed by hoisting, please ensure level position. Hoisting can only allow to bear the weight of the unit itself, do not withstand external forces from the air duct, water pipes and other objects.

(6) 机组所接的风管长度应与机组的额定出口静压相匹配，否则可能导致机组产生故障，机组进风口与风管间的连接应采用柔性连接；

(6) The length of the duct connected to the unit shall be matched with the rated static pressure of the unit. Otherwise, it may cause faults. The connection between the air inlet and outlet of the unit and the air duct shall be flexible.

(7) 安装前注意清洗进出水管，用户水泵出口处需安装过滤器，以免异物堵塞阀门。

(7) Please wash the water inlet and outlet pipes before installation. Install a filter at the outlet of user's pump so as not to block the valve by foreign bodies.

(8) 安装过程中需要对机组进行防尘保护。

(8) It is necessary to protect the unit from dust in the process of installation.

(9) 使用本产品时应在回风处安装过滤器，并定期清洗，以免影响正常的换热效果。

(9) It is necessary to install a filter at air return and clean regularly so as not to affect normal heat transfer effect.

(10) 风管安装要求：

(10) Duct installation requirements:

① 风管的设计应避免风管断面发生突然变化或在风机出口处使风拐弯。

① The design of the duct should avoid sudden changes in the duct section or turn the air direction at outlet of the fan.

② 送回风管都需保温，避免供冷时产生凝露水。

②Both air supply and return ducts need to be insulated, to avoid condensing water generated in cooling mode.

(11)水管安装要求:

(11)Water pipe installation requirements:

① 机组冷凝水管和进出水管标准螺纹式管接头,水管的安装应按国家相关标准进行。安装时,应避免盘管接头连接太紧,以免损伤盘管集水管和盘管接头。

① Condensate pipe and inlet and outlet pipes are standard threaded pipe fittings. Water pipe installation should be carried out according to relevant national standards. Avoid the coil connection is too tight, so as not to damage the collecting pipe and joints of the coil.

② 进出水管应按机组标识所示安装。进出水管于机组连接处应有防震软管及活接头,进出水管应装设 60 目以上水过滤器,以防止换热器结垢,降低换热效果,以便于清除管道中的杂质。

②The inlet and outlet pipes shall be installed as indicated by the unit identification. There should be a flexible hose and adaptor union at the connection between the water inlet & outlet pipes and the unit Users should install a water filter which is more than 60 mesh at water inlet and outlet pipes to prevent the heat exchanger from scaling which will reduce the heat transfer effect, in order to facilitate the removal of impurities in the pipeline.

③ 进出水管在机组外须装有阀门,用来调节流量和检修时切断冷热水源。与机组连接的水管重量不得由机组承担。

③The inlet and outlet pipes shall be equipped with valves to regulate the flow and cut off hot and cold water sources during maintenance. The weight of the pipe connected to the unit shall not be borne by the unit

④ 进、出水管、冷凝水管、阀门必须加保温层,以免夏季使用时产生凝露水。

④Inlet and outlet pipes, condensate pipes, valves must be added insulation layer,so as to avoid condensation water when when used summer.

⑤凝露水管应保持畅通,排水坡度>5%,有利冷凝水的排放。

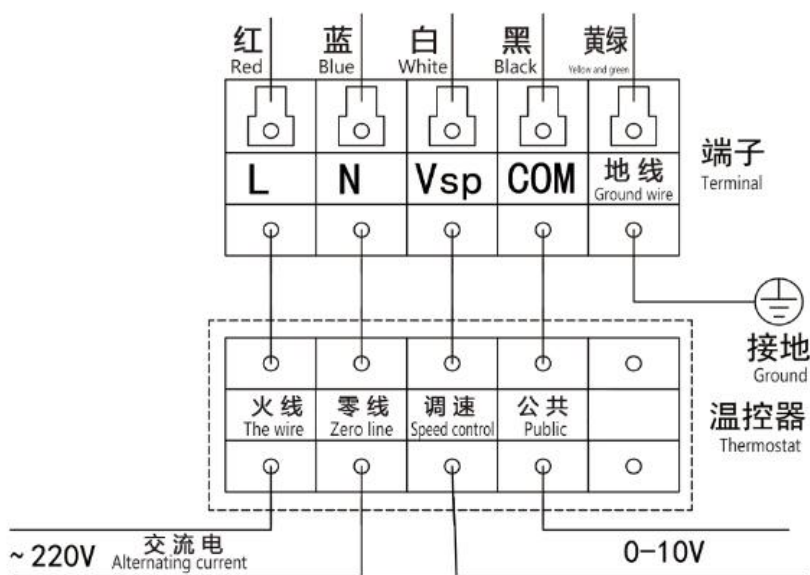
⑤Condensation water pipe should be kept unobstructed, drainage slope $> 5^{\circ}$, to facilitate condensate discharge.

⑥ 进、回水管连接时不能用力过猛,并应采用生料带密封,不得有渗漏现象发生。

⑥ Do not overexert when connecting inlet and return pipes and should seal with Teflon tape and do not make any leakage occur.

(12)在给机组电气安装前请检查所供电源是否与机组铭牌要求一致,在安装之前一定要断开电源,以防触电。电气连接必须按照机组电气接线图来进行,并确保机组有良好的接地;机组接线图如下:

(12)Please check whctbcr the power supply is consistent with the unit nameplate before installing the unit Be sure to disconnect the power supply before installation to prevent electric shock. The electrical connection must be carried out in accordance with the wiring diagram of the unit and ensure that the unit is well grounded. The wiring diagram of the unit is as follows:



按图及颜色对应接线，否则将会导致电机烧坏，甚至引起火灾!如因接错线而导致的电机绕组短路或断路，甚至火灾问题，厂家不承担任何责任!

According to the diagram and color corresponding wiring, otherwise it will lead to motor burn, or even cause a fire! If the wrong wiring caused by motor windings short-circuit or open, or even fire problems, manufacturers do not bear any responsibility!

三、机组运行 Unit Running

(1) 机组初次运行时，必须打开回水管上的放气阀，排净盘管内的空气，待有水流出再关闭放气阀。

(1) When the unit runs for the first time, users must open the air vent valve on the return pipe, to drain the air inside the coil; and close the air vent valve until there is water flowing out.

(2) 开机前，请先清除接水盘内、风机蜗壳内及机组周围的杂物。

(2) Before starting the unit, please remove the debris in the water pan, fan volute and around the unit

(3) 初次运行前先用手转动风叶，确保风叶不与蜗壳有碰撞或摩擦。

(3) Before the first operation, turn the blade by hand to confirm that the blade docs not have a collision or friction with the volute.

(4) 确认风机盘管电源接线正确后方可开机。

(4) Make sure that the fan coil power supply is properly connected before turning it on.

(5) 机组所用冷、热水需经软化处理。

(5) The cold and hot water used in the unit needs to be treated by softening.

四、维护保养四、维护保养 Maintenance

(1) 视使用环境的情况清洗过滤网，建议每两个月清洗一次；每两年清洗管道一次。

(1) Clean the filter net depending on the operating environment It is recommended to clean the filter net once every two months and the pipes every two years.

(2) 机组运行 2 至 3 年应全面保养，用化学方法清除盘管内水垢，以保证机组的换热性能。

(2) Wthe unit rans for 2-3 years, user should make a comprehensive maintcnance: remove the scale inside the coil by chemical method, to cnsurc heat transfer performance.

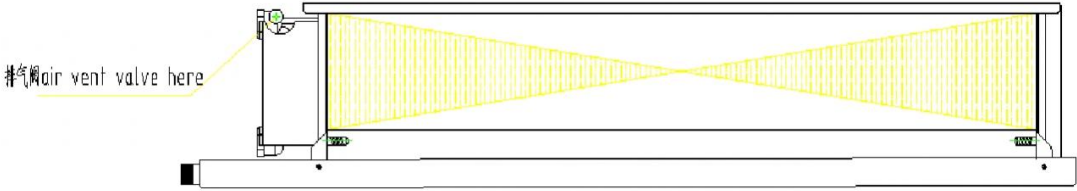
(3) 冬季长时间停用前，应通过进水口 阀体上放水嘴排净风机盘管中的水，以免冻裂风 机盘管的管道。

(3) Before stopping the unit for a long time in winter, users should drain all the water inside the unit by the drain nozzle of the valve body at the inlet, so as not freeze the fan coil pipes.

详细操作步骤如下：Detailed operation steps are as follows:

以左式机组为例，右式同左式，放水螺塞位于接水盘排水口一侧。打开放气阀，逆时 针拧下放水螺塞即可放水，排完水之后，再次拧紧放水螺塞和放气阀(注意重新缠绕生料 带)。

Take the left type unit as an example, and the right type unit is the same with the left one. The waterproof plug is in the water discharge side of the drain pan. Open the air vent valve, tum off the waterproof plug counterclockwise to drain the water. When the water is discharged, tighten the waterproof plug and air vent valve again (note: wrap with Teflon tape again).



(4) 定期对机组进行检查：清除接水盘中的杂物，清洁机组，检查电机及机组等固定是 否牢固。

(4) Check the unit regularly: remove the impurities in the drain pan, clean the unit and check to see if motor and the unit are fixed firmly.

五、常见故障及处理 Common Faults and Trouble Shooting

编号 No.	现象 Fault	可能原因 possible Cause	解决方法 Solution
1	机组不运行 the unit does not run	停电或没开电源 Power failure no power supply	等待来电或把机组电源打开 when power is restored, tum on the unit
		电源插头接触不良 Poor power supply plug	插好电源插头 Plug well again
		电机烧毁 Motor burned	更换电机，同时检查接线是否正确 Replace the motor and check if the wiring is correct
2	机组出现异响 Abnormal sound of unit	蜗壳变形或风叶变形，蜗壳与风叶相碰 Volute deformation or fan blade deformation, volute and fan blade collide	更换蜗壳或风叶 Replace volute or fan blade
		空气过滤网堵塞 Air filter clogging	清洗过滤网 Clean the filter net
		风口处或风管内 有杂物 there is debris at the air outlet or air duct	清除杂物 Remove the debris

		电机有异响 Motor has abnormal sound	更换电机 Replace the motor
		电机固定螺钉松动 Fixing screw of motor is loose	重新紧固 Re-tighten
3	风量不足 Insufficient air flow	空气过滤网堵塞 Air filter clogging	清洗过滤网 Clean the filter net
		机组回风口或出风口有杂物堵住 The unit's air outlet or outlet is blocked by debris	清理杂物 Remove the debris
		风管阻力超过设计值 Duct resistance exceeds design value	降低风管阻力或重新选配机组 Reduce the duct resistance or re-select unit
4	机组不供冷或不供热 The unit is not cooling or heating	空气过滤网堵塞 Air filter clogging	清洗过滤网 Clean the filter net
		机组阀门未打开 The valve of the unit is not opened	打开阀门 Open the valve
		换热器翅片堵塞或翅片倒片 Heat changer fins clogged or backwind	清洁或修复翅片 Clean or repair the fins
		机组供冷进水温度过高或供热时进水温度过低 Water inlet temperature is too high in cooling mode or too low in heating mode	调节主机进出水温度 Adjust the water inlet&outlet temperature on the heat pump(chiller).
5	漏水 Water leakage	冷凝水排水管堵塞 Condensate drain pipe is blocked	清洁排水管 Clean the drain pipe
		机组未按要求安装 The unit is not installed as required	调整机组安装至保持一定倾斜度 Adjust the unit to a certain degree of inclination
		环境空气湿度过大 Ambient temperature is too high	除湿并防止高温高湿的空气进入室内 Dehumidify and prevent high temperature wet air from entering the room
		风机停止运行而机组持续通冷水 The fan stops while cold water continues to enter the unit	关掉水阀或运行机组 Turn off the water valve or
		排气阀未拧紧 The air vent valve is not tightened	拧紧排气阀 Tighten the air vent valve