Product installation, use and maintenance instructions

Combined type air conditioning unit

（3rd edition）

1 Operation procedure of the unit

1.1 After the air conditioners finishing installation, debug and test,when begin production, please operate according to prescribed procedure.

1.2 preparation and inspection before starting

a. Clean residual impurities, water, dirt ,and other things inside each section,air pipes,etc of the unit.

b. Check if all the parts of the unit is fixed well.

c. Check if all the water resource,power, steam reach the requirement, connection is right.

e. Discharge all the dirt and dust inside the cooling water pipeline, avoiding copper tubes block up, effecting the heat transfer.

1.3 Start and stop the air conditioners in turn

a. Regarding the manual control air conditioners

The unit start orders: stop air return and fresh air adjusting valve, making outlet valve open→ start fans and water pump,etc.

The unit stop orders: close water pump→close fans.

b. Regarding using automatic control system air conditioners, please press the automatic control system to start and close the air conditioner.

1.4 when the fan is in normal running,starting water pump to convey the water, you should close the water supply valve, then start water pump, after this, gradually open the water supply valve, when close the water pump,you should close water supply valve firstly.

2 Considerations

2.1 Air conditioner should use hot water to do softening treatment, avoiding scaling.

2.2 it is strictly prohibited going into fan section when running.

2.3 when in maybe freezing area, surface air cooler stops working, you should discharge all the water inside, avoiding pipes burst.

3 Fault handling

Fan main fault and cause in below sheet:

fault	Cause
Fan vibrate heavily	1、Fan impeller and casing or air inlet friction 2、Vibration damper is moved, lost efficacy or fix in wrong place. 3、Impeller shaft hole and fit is loose,Impeller rivet is loose or impeller is with deformation. 4、The attachment bolt for casing, bearing base to bracket,bearing base to bearing cover,etc is loose. 5、Assembly type blade loosening and moved; 6、The blade is with dust ,fouling, abrasion or fracture,impeller deformation, shaft bending make the rotor unbalance.
Bearings temperature is too high	1、Bearing box vibrates severely 2、Bad quality grease, is metamorphic or containing dust, sand, dirt and other impurities, or lack grease. 3、The link-up for bearing base and bearing cover is not good,too tightening or loose. 4、Shaft and rolling bearing is fixed bad, front and end bearings are not concentric. 5、Bearing damage or shaft bending.
Motor current is too high, and temperature is too high	1、When starting, air volume control valve of every section is open, load is too large; 2、Duct leakage is serious, so that the load is too large; 3、The motor input voltage is low, power singly interrupt, or three phases current is not stable. 4、It is affected by the vibration of the bearing box; 5、It is affected by the abnormal operation of other fans.
others	1、two belt pulleys axis are not parallel or axial dislocation, causing deviation, tape bouncing or early wear of conveying belt. 2、the belts are too long, or some belts are not in same length,causing beat.

4 the maintenance,safety technology of unit

4.1 Air conditioners should be with professionals to operate and manage, maintenance, keeping good running records, when find problems, deal with it in time.

4.2 When fan is running, please do not go into fan section.

4.3 After running every 1000 hours, should add lubricating oil (grease) for the fan and motor bearing, and also replace the lubricating oil (grease) regularly.

4.4 You should check the fan conveying belt every month, and adjust it in time.

4.5 Check the fan air outlet soft joint, if broken, change it in time.

4.6 If fan bearing damage, change it in time, the installation structure of cone bearing,please see the figure:fan bearing installation drawing.

4.7 Maintenance of surface cooler

a．After running for two years, you should clean the surface cooler inner cavity by chemical cleaning method.

b．You should take pressure test for surface cooler every year（0.9MPa）,outer surface is coated with anti corrosive material;

c．The surface cooler not used in winter, you should discharge the water in time, avoiding pipes burst.

4. 8 You should check the electricity and lighting equipment of the unit regularly, please be not with electric leakage, and the unite must be with reliable ground connection.

4.19 You should the outer plate of air conditioners regularly, keeping clean.

4.20 The unit should be overhaul for one time each year,and clean the inside and outside of it, also doing dust removing and prevention.

4.21 The maintenance of matching equipment(water pump, fans,etc)，should do it according to the product instruction.