

Balancing method of single side rotor

Balancing operation process of single side rotor of axial flow fan and diagonal flow fan

In general, the static balance of axial-flow and diagonal flow fan rotors can meet the requirements of balance accuracy. The following is the process of static balance comparison.

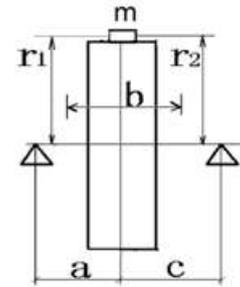
The reason why the rotor can not be balanced on both sides is because of its structure.

In this case, the settings of a, b, c, r1 and r2 are shown in the figure.

Where $b = r_1 = r_2$ is set

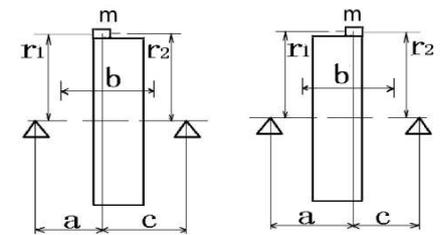
At this time, when the dynamic balancing process is carried out, the even unbalance value on the right side has reference value - the first value

represents the residual unbalance value after the static balance of the rotor is completed. Second, when adding the static balance value, if you can choose to be left or right, it depends on the even unbalance value. If the angle is the same or close, the static unbalance value is added to the right side, and on the contrary, the left side is added. This will reduce the even unbalance.

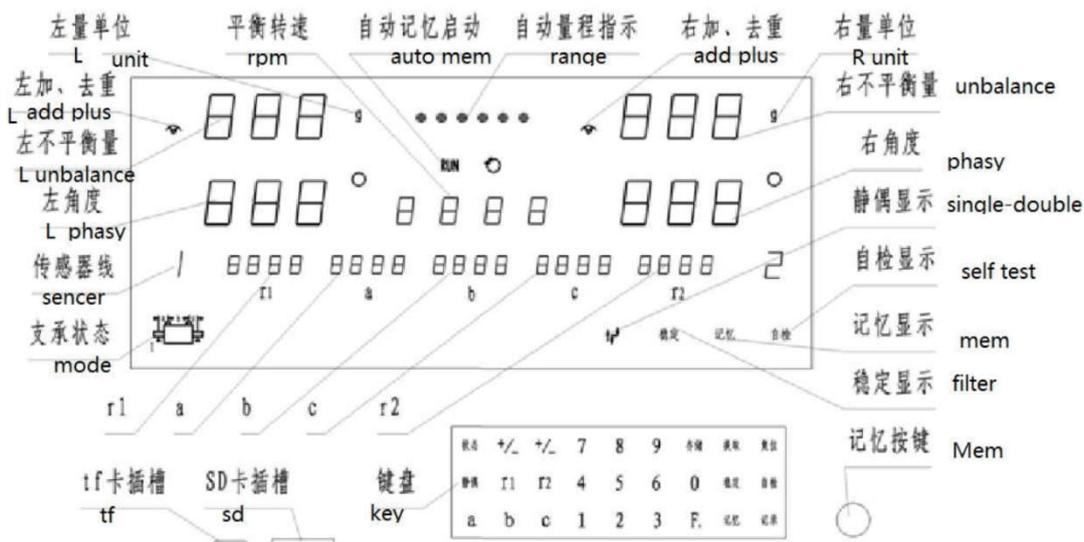


单面平衡数据设置方法

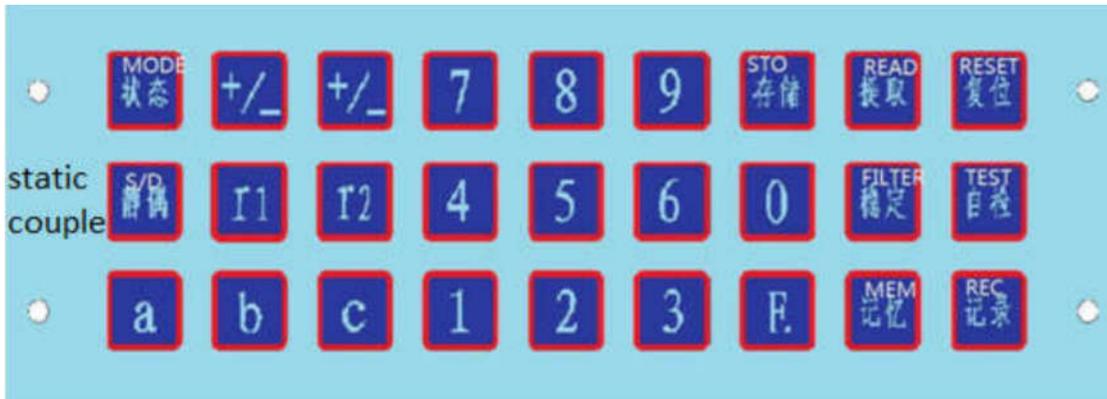
Data setting method of single side rotor



单面平衡数据设置方法 单面平衡数据设置方法



In a word: the static balance process needs to be done with the thinking of dynamic balance.

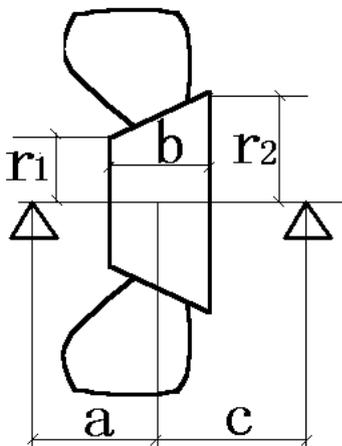


The purpose of balancing process is to reduce running vibration.

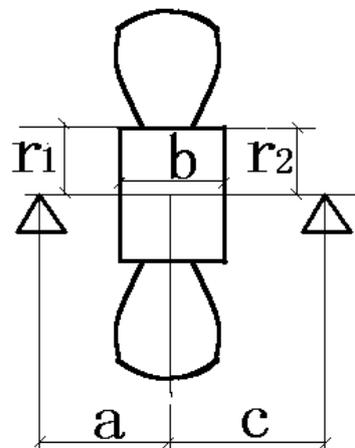
The size and angle of static unbalance are displayed on the left digital table, and even unbalance magnitude and angle are displayed on the right digital table. The counterweight operation is carried out according to the size and angle indicated by the left digital table. Generally, the counterweight is welded at the appropriate position in the rotor housing cavity. Trial counterweight operation should also be carried out during counterweight process. When the static unbalance indicated by the left digital meter is balanced to within the required accuracy, the rotor balance calibration is considered to be completed.

In the process of balancing the rotors of axial-flow and diagonal flow fans, counterweight operation is not required for the magnitude of even unbalance shown on the right digital table.

If the counterweight operation of couple unbalance is to be carried out, the dimensions a, b and c shall be readjusted according to the contents of dynamic balance method after the static unbalance calibration is completed, and the static couple key shall be pressed to carry out dynamic balance until the accuracy requirements are met.



图十七：斜流风机转子装载示意图



图十八：轴流风机转子装载示意图

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