**The difference between fresh air system and air purifier**

In recent years, fog and haze weather around the country has gradually increased, and the trend of intensifying and prolonging the cycle, and people continue to suffer from pharyngitis, pneumonia, even lung cancer, coupled with the Internet rumors, people are increasingly worried. The advice given by the government health department is nothing less than going out, opening windows and wearing masks. And close doors and windows will cause indoor carbon dioxide and other dirty and harmful gas accumulation, endangering the body. In the face of a dilemma, some experts suggested to install fresh air system for the home, but also for convenience, buy an air purifier. So, what's the difference between the fresh air system and the air evolution device?

Then, what is the "fresh air system"?

"Fresh air" is fresh air, "fresh air system" as the name implies is to provide fresh air to the living room (building) of the building mechanical and electrical system, it is by the central fresh air fan (or the host, including air handling function), ventilation ducts, air inlet (air and return) three parts. It will be indoor dirty air after heat recovery (energy saving) discharged to the outdoor, while outdoor fresh air after filtering and other treatment and then into the high-efficiency heat recovery device, and then be continuously uniform into the indoor.

The fresh air system delivers fresh and clean air 24 hours after the outdoor air is filtered by universities and effectively adsorbed by activated carbon, whether it's formaldehyde, dumb, toluene, xylene, radon, or carbon dioxide exhaled by our bodies, which requires frequent ventilation, although the indoor air is outdoor.  Gas pollution is 5-20 times, but at present our industrial waste, automobile exhaust, dust in the air will enter the room through the cracks in the doors and windows, so we need fresh air system for efficient filtration and adsorption. And the air purifier can only recycle indoor air purification, can purify indoor air smoke, particulate matter, dust, etc., but must be sealed room, and we all know that the human exhaled carbon dioxide purifier can not be purified, so air purifier can only solve indoor air in a short time, can not. Thoroughly improve the air quality of our living space.

What are the functions of the "fresh air system"?

The fresh air system has three basic functions: comfortable ventilation, efficient filtration and heat recovery.

Comfortable ventilation (healthy and comfortable). First of all, ventilation in the fresh air system is effective and thorough. Fresh air system is designed through the system inlet and return air caused by the pressure difference in the indoor air, so as to achieve mandatory and no dead angle ventilation room. In modern buildings, the air tightness of doors and windows is getting higher and higher. Indoor harmful gases (mainly formaldehyde and benzene in decoration materials, secondhand smoke, bacteria, infectious diseases virus, carbon dioxide, etc.) can not be discharged in time, which causes serious deterioration of indoor air quality, endangers human health, and can cause lung cancer, leukemia, etc. . Indoor air quality directly affects our quality of life, and ventilation is a more direct and effective way to provide indoor air quality, has become a necessary means to improve the living environment and improve the quality of life. In some developed countries in Europe, residential ventilation has been stipulated as mandatory.

Secondly, the ventilation of the fresh air system is orderly and controllable. Room ventilation can be divided into orderly ventilation and disorderly ventilation. Ordered ventilation refers to the fresh air into the indoor track and direction is fixed, controllable, it can send fresh air to the owner's needs, while indoor dirty air in a relatively short distance the first time out. The ventilation of fresh air system is orderly ventilation. Through the design of air outlet and air inlet, it forms a point-to-point ventilation route, designs the air inlet (fresh air) in the place where the owner needs more, such as bed, sofa, table, etc., and designs the return air inlet (dirty air) in the toilet and kitchen so that the dirty air can be discharged quickly after it is produced. Out.

Third, the ventilation of the fresh air system is gentle, quiet and continuous. No noise, will not form indoor lift and blowing feeling, fresh air into the room through treatment (heating or cooling, humidification or dehumidification) after approaching room temperature, comfortable, and can adjust indoor humidity, health and comfort, do more.

Efficient filtration (Health). Filtering is a relatively limited means to eliminate haze weather hazards in the living room. The filters of the fresh air system can be divided into initial effect, medium efficiency and high efficiency. Initial and intermediate filters can effectively filter dust, dust, pollen and other solid filters in the air, effective for PM10. PM10 refers to particles in the atmosphere whose diameter is less than or equal to 10 microns, also known as inhalable particulates. Particles with a diameter of more than 10 microns are blocked from the outside of the nose. Particles with a diameter of 2.5 microns and 10 microns can enter the upper respiratory tract, but some of them can be excreted through sputum, which is relatively harmless to human health. High efficiency filter (HEPA) can effectively filter PM2.5. PM2.5 refers to the equivalent diameter of the atmosphere is less than or equal to 2.5 microns of particles, also known as pulmonary particles or fine particles. PM2.5 is about one-tenth the size of human hair at 2.5 microns in diameter. Inhaled into the body, PM2.5 enters the bronchi, interferes with gas exchange in the lungs, and causes diseases including asthma, bronchitis and cardiovascular disease.

Heat recovery (comfort, energy saving). When the fresh air from the outside enters the room and discharges the polluted air from the room, the energy is transferred and exchanged between the two, leaving behind the energy (heat and cooling) of the polluted air discharged and transferring to the new air that enters the room.

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