Application of nitrogen generator in food packaging industry

Nitrogen is not active chemically and is not easy to react physically or chemically with other substances. It is an inert gas， which is often used as a protective gas to prevent some objects from being oxidized by oxygen when exposed to air.

Fill any food packaging bags and bottles with nitrogen and use them with a special packaging machine. It can prevent food from rotting and preserve for a long time for food preservation.

Food nitrogen generator is used for food preservation and food storage， food drying and sterilization， food rapid freezing， etc. Nitrogen filled storage and preservation of fruits， vegetables and tea is also a method. This method can slow down the metabolism of fruits， vegetables and vegetable leaves in the environment of high nitrogen and low oxygen， which is like entering the state of hibernation and inhibiting post ripening， so as to keep them fresh for a long time. According to the experiment， apples stored in nitrogen are still crisp and refreshing after 8 months， and food preservation: nitrogen storage and preservation of grain， fruits and vegetables; Nitrogen filled fresh-keeping packaging of meat， cheese， pickled mustard， tea and coffee; Nitrogen and oxygen filling and preservation of fruit juice， raw oil and jam; For the purification and covering of various bottles of wine， nitrogen is used to make the grain in a dormant and anoxic state and slow metabolism， which can achieve good insect， mildew and deterioration prevention effects， and the grain is not polluted. Nitrogen exhaust air is used to protect the grain such as rice， wheat， barley， corn and rice， which can prevent moth， no fever and mildew， so as to spend the summer with good quality. In this method， the grain is tightly

sealed with plastic cloth， first pumped into a low vacuum state， and then filled with nitrogen with a purity of about 98% until the internal and external pressure is balanced. This can make the grain pile lack of oxygen， reduce the respiratory intensity of grain， inhibit the reproduction of microorganisms， and all borers die due to lack of oxygen within 36 hours.

Before determining the specific model and specification (i.e. hourly nitrogen production， nitrogen purity， outlet pressure and dew point)， we should focus on the comprehensive comparative analysis of the performance and characteristics of the nitrogen generator， and make the correct choice according to our existing environmental conditions.

Under normal use， each program-controlled valve must be opened and closed once in each cycle (about 120 seconds). Based on 300 working days of the nitrogen generator every year， it operates continuously 24 hours a day， and the adsorption and desorption cycle is 4 minutes， then each valve needs to be opened and closed more than 200000 times a year. As long as one of the valves fails， it will affect the normal operation of the whole equipment. Therefore， the continuous service life of the valve is an important link for the stability and reliability of the nitrogen generator.

After using for a period of time， the filter element in the filter group will be blocked and the efficiency will be reduced， resulting in serious pressure drop of compressed air， reduced efficiency of nitrogen making host and reduced nitrogen production. At this time，

the filter element needs to be replaced in time. Generally， the filter element replacement cycle of industrial nitrogen generator is about 8000 hours， or the filter element can be replaced according to the instructions of the differential pressure gauge of the filter group.