

# Sunflower Seed Oil Plant Microwave Drying Equipment

The microwave drying system is mainly composed of microwave generator, power supply, waveguide device, heater, cooling system, transmission system and control system. The microwave tubes used for heating and drying are mainly klystrons and magnetrons. Klystron is often used in high frequency or high power applications. Microwave generated by microwave tube is transmitted to heater through waveguide device. The heaters are mainly box type, plate type and waveguide type.



[Microwave drying equipment:](#)

Electromagnetic radiation drying is to use the electromagnetic induction or infrared radiation effect of microwave to heat and dry materials. Different from other external heating drying methods, this drying method is a method of uniform heating from both outside and inside of the material. Therefore, this drying method has a short time, does not deteriorate or coke due to overheating, and its drying products are of good quality, especially the drying effect of heat-sensitive food is more satisfactory.



#### Characteristics of [Sunflower Seed Oil Plant Microwave Drying Equipment](#):

Microwave drying is an efficient, energy-saving, stable, reliable, simple equipment, easy operation and new technology. Microwave dryer is characterized by continuous production of equipment, only need electricity, no need for other energy, can quickly dry materials, equipment occupies a small area, pollution-free, simple operation; no need for preheating and no energy loss after shutdown. Less labor, high quality products. The advanced equipment is a high-tech product which can not be replaced by other equipment. Heating Principle of Microwave Dryer: Microwave refers to electromagnetic waves with frequencies ranging from 300 MHz to 300 MHz. The water molecule in the heated medium material is a polar molecule. Under the fast changing high frequency electromagnetic field, its polar orientation will change with the change

of external electric field, resulting in the movement of molecules and mutual friction effect. At this time, the field energy of microwave field can be transformed into heat energy in the medium, which makes the material temperature rise, and produces a series of physical and chemical processes, such as heating and expansion, to achieve the purpose of microwave heating and drying.



**Energy saving of microwave drying equipment:** Because the substance containing water is easy to absorb microwave and heat, there is almost no other loss except a small amount of transmission loss. Therefore, it has high thermal efficiency and energy saving. Microwave drying equipment can save more than 1/3 energy than infrared drying. **Anti-mildew, sterilization and preservation of microwave drying equipment:** Microwave drying equipment has thermal and biological effects. Microwave drying equipment can sterilize and prevent mildew at lower temperature. Because of its fast drying speed and short drying time, it can preserve the activity of materials and vitamins, original color and nutritional ingredients in food to a great extent. **Advanced Technology:** As long as microwave power is controlled, microwave drying equipment can achieve immediate drying and termination.