

# What Is The Difference Between Dry Puffing And Wet Puffing?

**Increase the material temperature, soften and partially pre-cured materials, and add a certain amount of moisture. For most materials, wet expansion is more efficient than dry expansion.**

Some people think that dry puffing means no water is added, and wet puffing means adding water. This view is relatively one-sided. Here is the difference between the two methods:

## 1. The Production Process Is Different

According to whether the material is steam quenched and tempered before entering the extruder barrel, it is divided into dry expansion and wet expansion. If it is steam quenched and tempered, it is a wet working mode; otherwise, it is a dry method.

### Dry puffing:

In the feed processing industry, a puffing method. According to the water content of the material itself, different proportions of water are added to mix with the material, using extrusion, friction, propulsion, instantaneous high temperature, and a series of processing techniques to quickly spray out, so as to achieve the purpose of expanding the material to improve the Digest the utilization rate and reduce the bacterial content of the material.

### Wet puffing:

A puffing method that requires higher material humidity during the puffing process. A puffing process that achieves the required humidity and pressure of the material by injecting a certain pressure of steam into the puffing cavity during the puffing process.



## 2. Different production equipment

Different production processes determine different production equipment.

Dry puffing adopts dry puffing machine: no steam conditioner and no steam.

Wet puffing uses a wet puffing machine: a conditioner is required and steam is used.



### 3. Purpose of steam conditioning:

Increase the material temperature, soften and partially pre-cured materials, and add a certain amount of moisture. For most materials, wet expansion is more efficient than dry expansion. A simple analysis takes into account only the temperature factor. If the expected maturation temperature of the material is  $130^{\circ}\text{C}$ , the extruded part of the dry expansion screw will increase from room temperature ( $20^{\circ}\text{C}$ ). To reach this value, the temperature needs to be increased by  $110^{\circ}\text{C}$ . If the wet method is used for production, the temperature after quenching and tempering is  $80^{\circ}\text{C}$ , and the material temperature of the screw extrusion part needs to be raised to  $50^{\circ}\text{C}$ . So the mechanical energy required is less than that of the dry method and more energy can be used to increase production. In addition, due to the softening of the material, the wear on the screw and barrel will be reduced.



Shandong Loyal Industrial Co., Ltd. is a scientific and technological enterprise integrating scientific research and development, manufacturing training, and international trade. For more than ten years, we have been committed to the development and research of extrusion technology and equipment, and have now become the main domestic extrusion production equipment professional manufacturer .