# How do twin-screw extrusion puffing machines and drying equipment create a stable and efficient production line?

**If you want to know more story about LOYAL brand? here  can help you -** https://www.facebook.com/foodmachineloyal

When you plan to set up a new production line, whether for breakfast cereals, textured protein, or pet food, several questions might be on your mind: Is the equipment stable? Is the product quality up to standard? Are the energy consumption and costs high? Is maintenance and upgrading complicated?

At Shandong Loyal Industrial Co.,Ltd., we work with our customers every day to solve these problems. We understand that reliable equipment is the cornerstone of the entire production system.

Core Equipment: More Than Just "Puffing"

When it comes to our flagship equipment –the twin-screw extrusion

puffing machine – many customers' first impression is that it "can puff raw materials." That's true, but its capabilities go far beyond that.

You can think of it as an efficient, multi-functional "chemical and physical reactor." Through two intermeshing screws, under precise control of temperature, pressure, and shear force, it can achieve:

Mixing and Blending: Uniformly mixing various raw materials (such as grains, protein powder, and nutritional additives).

Cooking and Maturation: Gelatinizing starch and denaturing proteins, bringing the materials to an edible, cooked state.

Forming and Shaping: Directly producing various product shapes such as flakes, granules, and strips through different molds, such as corn flakes, textured protein filaments, and pet food pellets.

This process is continuous and controllable. Our engineers will meticulously adjust the screw configuration and process parameters based on your specific formula and product goals to ensure your product achieves the ideal texture, structure, density, and nutritional retention.

Key Link: Drying Equipment Determines the "Later Life" of the Product

Puffing and shaping is only the first step; the subsequent drying process is equally crucial. Moisture control directly affects the product's shelf life, crispness, and final quality.

Our drying equipment (such as multi-layer mesh belt dryers) focuses on "uniformity" and "energy efficiency." Through independent temperature and humidity control in different zones, and reasonable airflow design, we ensure that every piece and every granule on the production line receives consistent heat treatment, avoiding localized overdrying or underdrying. This not only guarantees the stability of product quality but also effectively reduces the scrap rate and energy waste caused by uneven drying.

One-stop solution: We provide a "turnkey" project.

We understand that you need not just an isolated machine, but a production line that runs smoothly and creates value. Therefore,

Shandong Guoyu Automation Technology Co., Ltd. focuses on providing one-stop solutions from core equipment to overall layout.

Our currently mature solutions include:

Breakfast cereal corn flakes production line

Textured protein (plant-based meat) production line

Extruded breadcrumbs production line

Nutritional meal replacement powder production line

Modified starch/pregelatinized starch production line

Artificial rice production line

Pet food production line

Aquatic feed production line

Extruded food production line

From initial process discussions and factory planning to the provision, installation, and commissioning of core twin-screw extrusion and drying equipment, and subsequent production training and process support, our team will follow up throughout the entire process. Our goal is that when the production line is delivered to you, you will already have the ability to stably produce qualified products.

At Shandong Guoyu Automation Technology Co., Ltd., we rarely speak in empty platitudes. We prefer to spend our energy on screw selection and design, drying chamber airflow simulation, and on-site parameter adjustments with you. We believe that stable and reliable equipment and practical and thoughtful service are the best way to build trust.

If you are planning a new production line, or have ideas for upgrading or modifying your existing production line, whether you want to learn more about the details of twin-screw extrusion machines or need a complete drying equipment solution, please feel free to contact us. Shandong Guoyu Automation Technology Co., Ltd. looks forward to communicating with you and using our expertise to safeguard your products.

# Reference

The following are five authoritative foreign literature websites in the field of Industrial food machinery:

1. Food Engineering Magazine

Website: https://www.foodengineeringmag.com/

2.Food Processing Magazine

Website: https://www.foodprocessing.com/

3.Journal of Food Engineering

Website:https://www.journals.elsevier.com/journal-of-food-engineering

4. Food Manufacturing Magazine

Website:https://www.foodmanufacturing.com/

5. International Journal of Food Science & Technology

Website:https://onlinelibrary.wiley.com/