The Aromatic Drying Technology...

Arcos

Drying and Smoking Units for the Smoked Fish Processing Industry
Manufacturer’s experience...

Specialists in meat product drying and smoking, our skill has been proven in the Meat Industry.

Our process is the control of air flow, temperature and humidity, offering to the food industry efficient solutions to optimize their production efficiency and product quality.

Our experience is the result of understanding our customer’s needs: Originally, we manufactured adaptable autonomous drying units in order to improve existing traditional cooking and smoking units.

Our engineers then realized that only a perfect drying control unit would give the users the confidence expected in quality smoking and drying of various products, therefore, we felt the need to create a new revised unit with specific process controls adapted for the smoked fish processing industry.

Users needs...

To meet the increasing demand for quality dried and smoked products, such as fish, the existing traditional smoking and cooking units would no longer satisfy the industries specific demands.

The requirements are precise:

- Guaranteed superior quality due to perfect control of internal temperature ranging from +10°C to +120°C (50°F to 248°F).
- Optimized conditions of product conservation and operating efficiency, with really good performance levels as to dehumification.
- Balanced processing for all the products in the unit, without having to move the trolleys around during the cycle.
- A smoking system that combines "traditional aromas" with optimal production efficiency.
- A machine that is easy to clean and service.
- Precise, simple use that allows you to modify the production process.

ARCOs has put its expertise into the development of a unique and specific range of drying and smoking units that are fully suited for quality production of process sensitive products.
The diversity of “CTF” units, resulting from the collaboration between professionals, users and ARCOS technology, reinvents, at last, the aromatic drying.

Whether it be the “Traditional” with 1, 2, 4 trolleys or the “Tunnel” type without restriction in the number of trolleys, it integrates all the strong points of our technology.

Our manufacturing quality abides with the requirements of the industrial world:

- Completely built in 304L stainless steel.
- 80 mm (3.15 inch) thick insulated wall panels with polyurethane foam for an optimum insulation.
- Steel sheet panels in 12/10.
- Reinforced front side with 304L 20/10 stainless steel.
- 304L 30/10 stainless steel floor.
- Equipment and ventilation shafts of 10/10 to 15/10 depending on the necessities.
- Cooling system made of stainless steel tubes.
- Maximum evacuation of condensate through 4 mm (0.16 inch) step fins and vertical air flux from top to bottom.
- Heating elements with step fins for a better performance and a longer lifespan.
- Equipment accessibility without dismantling.
- It’s conception avoids the projection of condensate on the products during the cycle.
- Automatic washing system with integrated cleaning measures.
- Modular construction panels for easy assembly and dismantling.
The Characteristics of a Single Technology...

Closed Circuit Air Cooling...

Existing processes use the open air conditioning theory, contrary to ARCOS’s technology. Depending on the adjustments, the humidity in the units is controlled by introduction of outside air.

This system has several drawbacks:

- Irregularity in drying and smoking products, resulting from uncontrollable climatic variations of outside air throughout the seasons.
- The introduction of bacteriological uncontrollable air on products, contrary to hygiene and standards requirements imposed by local regulations.

These drawbacks are definitely resolved with the controlled cool air process in closed circuit systems established by ARCOS.

Dehumification...

Our system is based on a dehumification by condensation. The wet air goes through a condenser.

The water content in the air condenses in the condenser and the heat is evacuated from the unit.

The obtained dry air is then reheated in order to keep a constant temperature through the unit.

The capacity of dehumification of the unit is proportional to the capacity and size of the cooling unit supplied.

This process in this closed circuit allows drying performances independent of outside temperatures and humidity.

In the smoking phase, the closed “Cool Air” principle allows a perfect control of humidity and smoke density.
**VARIO-FLUX process,**

One of the criteria’s for the efficiency of our equipment is the uniformity of drying and smoking in the products and this through homogeneous control throughout the unit.

Our single ventilation process, “VARIO-FLUX”, guarantees this result.

*Automatic Control…*

Precise, reliable and user friendly, control by a programmable controller.

Thanks to a “Compact” model or a more sophisticated model “Graphic Line”, we can offer solutions adapted to your use.

Our software “Visuline” will bring you all the features of a personalized and efficient CTM system (Centralized Technical Management)
Smoke producers...

Entirely autonomous and independent from the unit, our equipment can be assimilated to smoke generators. Two types of smoke production can be supplied:

- **Smoking via a combustion type generator:**
  This traditional approach to smoked products uses a sawdust type generator (the air used to burn the sawdust has a reduced oxygen content). This combustion generates acid, phenolic, and carbonyl compounds that are essential for the final quality (they have very good bacteriostatic and antioxidant properties). The considerable aromatic richness of the smoke produced is often a strong asset.

- **Smoking via an atomization unit:**
  Free of exterior discharge and in full safety, this system uses compressed air to atomize liquid extracts of condensed smoke in the unit (pH 2.5). The smoking liquid is packed in containers, and it is available with several aromas depending on the types of wood used. Assimilated to traditional smoking, atomization also enables you to avoid the undesirable side effects of smoking via combustion (benzopyrenes that can present a health hazard, constraints of cleaning and of storing the wood). Furthermore, it can considerably shorten production lead times (by up to 50%). Its bactericidal properties (low pH) constitute a further asset.

A large range of meat products drying equipment for premises from 50 to 800m$^3$...