

Gentle and Reliable Drying of Pet Food

Pet food is dried in a gentle and likewise energy-saving way using a drying method that has been employed successfully in the human food industry for several years. Benefits for the user include the retention of flavors, valuable vitamins and other ingredients as well as an appealing appearance, to name but a few. Government subsidies are meanwhile available in support of this low temperature heat pump assisted drying method.

The German drying system manufacturer Harter developed the so-called heat pump based condensation drying method more than 30 year back and has meanwhile installed over 2,000 drying systems in various sectors of industry. Companies in the food sector, too, have detected the benefits of this method for their purposes. So, Harter has also realised many successful food or pet food projects.

The big success of this low temperature process is based on its physically alternative approach. Drying is accomplished using extremely dry and thus unsaturated air passed over or through the product to be dried. This dry air is an excellent means of absorbing any humidity present. Subsequently, the air is cooled – the humidity condenses to form water – reheated and returned to the drying chamber. For drying to be effective, the way of routing the air is essential. It is only by passing the air precisely to the point(s) where it is supposed to be that good and uniform drying results may be obtained. The drying temperature may be selected between 20 °C and 75 °C, as appropriate to the specific product or specific product or



Figure 1: Versatile – Chamber dryers and compact dryers are suitable for processing bulk material and products placed in single layer alike. Low temperatures are used to ensure gentle drying.

process. If sterilization is desired Harter may integrate an optional 110 °C high temperature process step. A cooling step may also be provided if required for the specific process. The drying time depends on the residual humidity desired or required. For packaged food, where the wet package needs

to be dried, the drying time is often restricted to a few minutes to meet the specified process cycle time. For direct food drying, the drying time is often longer and as needed to obtain the residual humidity of the product.

Special systems and standard dryers

Condensation drying is suitable for both batch and continuous processes. For food drying, Harter has brought to the market a special batch dryer with a multifunctional trolley. Its smaller cousin, a compact dryer, is perfectly suited for laboratory or product development purposes. A special feature of these two dryers is that they may be loaded with trays or baskets of various sizes and designs. This way, products may be dried in single layer or in bulk up to 175 mm high. The trolley or drying chamber may be



Figure 2: Pet food must be dried to obtain the specified residual humidity while stand-up pouches require one hundred percent drying. Both requirements are fulfilled by Harter systems and their reproducible processes.