Spray Drying in a box

The SANOVO Box Dryer technology combines high performance with gentle air drying for your benefit.
Why invest in a SANOVO Box Dryer?

SANOV0 Gentle Air Box Dryer’s is a better alternative to traditional spray drying towers for production of powder from a wide range of ingredients and food products. The SANOVO Box Dryer is offering a number of unique benefits for you and your projects.

Reduce Total Cost of Ownership

Reduced Building height
Horizontal spray drying is generally smaller than towers and the design reduces the required floor space and building height significantly and thereby the overall investment in building and platforms.

Often the box dryer can be installed in an existing building.

Less cleaning and more uptime
The need for cleaning is less as the powder is kept under sanitary conditions in the box with minimum risk for bacterial growth as there are no powder conveying ducts and drying chamber is fully insulated by PU sandwich panels.

Due to the horizontal design, the drying chamber is easy accessible for manual cleaning when required or for change of product. CIP cleaning is optional.

No loss of products (higher yield)
The entire drying process of the powder takes place in the drying chamber and the bag filter is an integrated part of the drying chamber. There is no external powder conveying ducts or drying chamber is fully insulated by PU sandwich panels.

This is minimizing the loss of product during cleaning or change of product.

Reduced Energy consumption
The SANOVO Gentle Air Box Dryer is provided with a high efficient air-heating system, heat recovery unit and a drying chamber constructed of pre-insulated PU sandwich panels for minimal heat loss. The box dryer minimizes the heat demand for drying process (steam, natural gas, oil), often being more than 60-70% of the operation costs. The reduction in energy consumption makes the SANOVO Gentle Air Box Dryer a more environmentally friendly solution.

High quality powders

Preservation of product properties
The gentle air drying condition takes place at a low drying temperature. This ensures a final powder with the highest possible nutritional and functional properties when it comes to protein content, solubility and colour.

Nozzle atomization
High bulk density and a free-flowing powder is achieved by using nozzles. By selection of different nozzles and pressure it is possible to obtain different powder particle sizes and powder qualities.

Differential residence time in the drying chamber for different powder particle sizes gives an uniform drying of the product.
The SANOV Gentle Air Box Dryer

Everything in a Box

The SANOV Gentle Air Box Dryer is designed for a wide range of food products and to produce high quality powders at lowest energy consumption.

The technology is characterized by an improved insulation, hygienic design, simple operation and long running time between cleanings.

Easy start-up and shut down with automatic nozzle control

Automatic nozzle control for start-up / shut down and supervision during operation can be supplied.

Nozzles stems are easy accessible and CIP cleaned in a close loop and can individually be changed/cleaned without interrupting the operation of the dryer.

Minimum powder loss integrated bag filter

Easy and fast change of product without lifting equipment from the top of the drying chamber when changing product or cleaning.

No external powder conveying ducts as the bag filter is integrated in the drying chamber. This minimizes the loss of product and comply with global environmental standards for emissions.

SANOX indirect heating

Drying air is completely separated from process air in a special designed combustion chamber. This system has 98% heat efficiency compared to direct heating based on natural gas, oil or bio fuel firing.

Optimized nozzle geometry

Optimized air flow in the drying chamber ensures a minimum powder build up on walls.

Low heat loss with sandwich panels

Drying chamber is constructed in a rigid stainless steel sandwich construction with 80 mm / 3.2 inch injected polyurethane foam insulating 2 times better than mineral wool reducing the heat loss.

The drying chamber construction is fastened in one side with a sliding construction which facilitates heat expansion and avoid heat stress.

Superior drying condition by unique designed plenum

Process air is distributed through a unique designed plenum for constant air flow over the individual spray nozzles.

Wall (orifice plate) between plenum and drying chamber is cooled with temperate air to minimize scorched (discoloring) particles and solubility or sediment problems.

Heat Recovery

Significant saving in the energy consumption obtained by pre-heating of the in-take air by the hot exhaust air from the drying chamber in high efficient tube heat exchanger.

ATEX compliant

Depending on local regulations and on the powder explosivity, ignition and electrical resistivity, the dryer can be supplied with a number of pressure relief membranes.
At SANOVTECHNOLOGY GROUP you are the most important asset and we want you to feel as such. When you place an order with us, you get a lifelong and dedicated partner, who will thrive to make your production and business a success.

With more than 60 years of experience as a supplier to the food industry, we can be your lifetime performance partner in any area of your business. Whether you are looking for new equipment or want to optimize your existing production, we will provide you with an experienced team of experts dedicated to ensure your business and improve your competitiveness.

We provide you with a complete solution and knowhow, and put in an effort to ensure a product range that exceeds your expectations and guarantees a performance you can depend on.

We care
- About your business
- About your performance
- About your expectations

We offer
- More than 25 years’ experience building spray dryers
- The only box dryer designed and manufactured in Europe
- Customized equipment
- Performance optimization
- Product development
- Training and knowhow
- Test dryer facility for making trials

Work process in steps

Your project involves the entire organization of SANOVTECHNOLOGY GROUP. When an agreement has been entered an experienced team of technicians, project- and service managers will make sure that your order will be fulfilled the best way possible.
Challenge us with your product

Call us for more information
We appreciate your requests and will always allocate our experienced and dedicated staff to give you a comprehensive reply.

Reserve time for a test trial
We have installed a box dryer to carry out trials for our existing and new customers. We invite you to send us a sample of your liquid product, in order to test the quality and properties of your spray dried product produced on our Gentle Air Box Dryer.

This is an ideal opportunity for you, when developing new products to the market.

Experience the box dryer in action
We will plan a reference visit for you at one of our existing customers’ plants. This gives you the possibility to see the box dryer in action and learn from others’ experiences.