

Spray Drying Equipment Market by Type (Rotary Atomizer, Nozzle Atomizer, Fluidized, Centrifugal, Closed Loop), Cycle, Flow Type (Co-Current, Counter Current and Mixed), Operating Principle, Capacity, Drying Stage, Application - Global Forecast to 2027

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Abstracts

According to MarketsandMarkets, the global spray drying equipment market size is estimated to be valued at USD 5.1 billion in 2022 and is projected to reach USD 6.8 billion by 2027, recording a CAGR of 5.9% in terms of value.

Spray drying equipment is defined as processing equipment that converts a mixture from liquid to powder form. The stages of the spray drying process include feed preparation, atomization, drying, and separation of the powder from moist gas. The technique is used in various applications, including food, pharmaceutical, feed, chemicals, and others, such as (ceramics materials, agriculture, and pollution control). Spray drying is the most preferred technique due to its ease of usage and short run time. With respect to the food industry, spray dryers are used in the processing of fruits, juices, milk powder, salt, and beverages.

“By application, there is an increased use of spray drying equipment for encapsulation in food & beverage, driving the growth of the spray drying equipment market”

Spray drying is one of the simplest, fastest, and most scalable encapsulation techniques. For the development of food formulations containing high-cost active ingredients, novel technologies such as nano spray drying have emerged. The incorporation of active ingredients via drying technologies has been the focus of bioactive compound encapsulation. The particle size of the encapsulated final products has been classified as nanocapsules for sizes of 100–1,000 nm, microcapsules for sizes

of 1–1,000 m, and millimeters for encapsulated particles larger than 1 mm. As a result, it is widely used in the food & beverage industry to encapsulate valuable active ingredients.

“By product type, Rotary atomizers to lead the market in terms of market share”

Rotary atomizers convert feed into fine droplets by spraying them through a high-speed rotating perforated disc, which is known as rotary disc atomization. These atomizers are driven by high-velocity liquid discharge from the edge of a disc. The spinning disc utilizes the shearing action of the air at the outer edge of the disc to break the liquid feed into a spray that leaves the disc in a horizontal direction. Rotary atomizers produce fine to coarse droplets, ranging from 30–120 micrometers. They are generally more expensive than nozzle atomizers but do not clog the outlets and can produce uniformly sized droplets.

CMT Atomizers introduced a new generation of rotary atomizers with high-speed gearboxes in January 2022. This new atomizer completes the range of technologies now offered by CMT Atomizers, which includes all possible variants such as air drive, belt drive, direct drive with high-speed motor air cooled, direct drive with high-speed motor liquid cooled, and gearbox drive.

“The European region is projected to grow at the highest market share during the forecast period”

Spray drying equipment is used in the pharmaceutical industry in Europe to process both primary pharmaceuticals, such as Active Pharmaceutical Ingredients (API) and final pharmaceutical formulations. Europe also accounts for a larger market share for aseptic spray drying for parenteral drug products, which involves a continuous production process. The drugs are approved by the European Medicines Agency (EMA) and the World Health Organization (WHO), which have laid down the regulatory requirements. This type of drug formulation involves the spray drying technique for testing and commercial production, which is projected to drive the growth of the spray drying equipment market in Europe. The spray dryers preferred and installed in Europe are usually larger in size and used for commercial purposes due to the large-scale industrial production of related products.

Spray drying processes in Europe are also applied in the food and feed industries. Europe exports its food ingredients and dairy products mostly to the other regions. A comparatively small amount of cheese, butter, and Whole Milk Powder (WMP) from

selected destinations is imported into the European Union (EU), and a large share of these imports come from countries in Europe, such as Switzerland and Italy.

The break-up of Primaries:

By Value Chain Side: Demand Side-41%, Supply Side-59%

By Designation: CXOs-31%, Managers – 24%, and Executives- 45%

By Region: Europe - 25%, Asia Pacific – 15%, North America - 45%, RoW – 5%, South America-10%

Leading players profiled in this report:

GEA Group (Germany)

SPX Flow (US)

Shandong Tianli Drying Technology and Equipment (China)

B?CHI Labortechnik (Switzerland)

European SprayDry Technologies (UK)

Dedert Corporation (US)

Changzhou Lemar Drying Engineering (China)

AcmeFil Engineering Systems Pvt. Ltd (India)

New AVM Systech (India)

Advanced Drying Systems (India)

LabPLant (UK)

Swenson Technology, Inc. (US)

Yamato Scientific America (US)

Tetra Pak international S.A. (Switzerland)

G Larsson Starch Technology AB (Sweden)

Hemraj Engineering (India) LLP (India)

Saka Engineering Systems Pvt. Ltd. (India)

SiccaDania Group (Denmark)

Freund Vector Corporation (US)

Sanovo Technology Group (Denmark)

Raj Process Equipment & Systems Pvt. Ltd. (India)

Shachi Engineering (India)

Spray Tech Systems (India)

Shree Sai Equipment & Services (India)

Shanghai Pilotech Instrument & Equipment Co. Ltd.(China)

Research Coverage:

The report segments the spray drying equipment market on the basis of product type, cycle type, drying stage, flow type, capacity, operating principle, application, and region. In terms of insights, this report has focused on various levels of analyses—the competitive landscape, end-use analysis, and company profiles, which together comprise and discuss views on the emerging & high-growth segments of the global spray drying equipment, high-growth regions, countries, government initiatives, drivers, restraints, opportunities, and challenges.

Reasons to buy this report:

To get a comprehensive overview of the spray drying equipment market

To gain wide-ranging information about the top players in this industry, their product portfolios, and key strategies adopted by them

To gain insights into the major countries/regions in which the spray drying equipment market is flourishing

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*Details on Business overview, Products offered, Recent developments, Deals, MNM view, Key strengths, Strategic undertaken, and Weaknesses and competitive threats might not be captured in case of unlisted companies.

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