

Spray Drying Equipment Market: By Product Type (Rotary Atomizer, Nozzle Atomizer, Fluidized and Centrifugal); By Stage (Single-Stage, Two-Stage and Multi-Stage); By Flow Type (Co-Current, Counter-Current, and Mixed Flow); By Application (Food & Dairy, Pharmaceuticals & Nutraceuticals, Chemical and Others); and Region – Analysis of Market Size, Share & Trends for 2014 – 2019 and Forecasts to 2030

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Abstracts

Product Overview

Spray drying facilities are used to remove the moisture content from the product. A basic spray drying process consists of dispersing a liquid/slurry in the form of small droplets and then bringing it into contact with a hot gas. The hot gas causes all the moisture from the droplets to evaporate and we eventually get our product in the form of grains. The most popular spray dryer equipment design consists of a long column/vessel with the top-end slurry dispenser and hot gases circulating from bottom to top fashion. Spray drying is one of the fundamental operations of any chemical process industry and when the product is heat sensitive, it is the preferred drying method. In the food and pharmaceutical industry, it has finds immense applications.

Market Highlights

Spray Drying Equipment Market is expected to project a notable CAGR of 5.9% in 2030. Spray Drying Equipment Market to surpass USD 7.5 billion by 2030 from USD 4.2 billion in 2018 at a CAGR of 5.9% throughout the forecast period, i.e., 2019-30. The growing pharmaceutical, food, and chemical industries are driving the growth of the global market for spray-drying equipment. Some macroeconomic factors that have a positive



impact on the global market for spray drying equipment include rapid urbanization, population growth, lifestyle change, and domestic revenue growth. The high investment in technological advances to develop the equipment is the trend identified in the worldwide spray drying equipment market. In Asia Pacific, the market players in spray drying equipment have a significant opportunity due to the rapidly growing pharmaceutical industry. Global market players in spray drying equipment also have the potential to penetrate the market through the application of the food industry, such as food encapsulation.

Spray Drying Equipment Market: Segments

Fluidized segment to grow with the highest CAGR during 2019-30 Spray Drying Equipment Market is segmented by product type as rotary atomizer spray dryer, nozzle atomizer spray dryer, fluidized spray dryer, closed-loop spray dryer, centrifugal spray dryer. The greater market share of 41.3% in 2018 was accounted for by the nozzle atomizer segment of the Spray Drying Equipment market owing to the substantial adoption of equipment based on nozzle atomizer to produce coarser and free-flowing powders. Besides, nozzle atomizer dryers can also be used to offer a broad range of flow rates in conjunction with multiple nozzle installations. For applications that require optimum flow rates and involve the production of flexible particle sizes, these are therefore the ideal option. On the other hand, it is expected that the increasing need to reduce the moisture content during the processing of pharmaceutical products and to achieve optimum quality and fine granular particles during the processing of food products will trigger the adoption of fluidized dryers during the forecast period. One of the main factors that have led to an increase in demand for rotary atomizers is their capacity to produce uniform and fine particle size for non-viscous fluids.

The multi-stage Segment to grow with the highest CAGR during 2019-30 Spray Drying Equipment Market is segmented by stage into multistage, two-stage, and single stage. The two-stage segment accounted for the largest market share of more than 39.1% in 2018 and is estimated to maintain dominance in the future. Because of lower production costs, this can be attributed to increasing demand for these dryers across different industrial applications without compromising product quality. Due to the benefits offered by this equipment, such as the ability to process varying volumes of feedstock, two-stage dryers are usually used by medium- and large-scale industrial manufacturers. However, due to its advantages, the multi-stage product segment is expected to register the highest CAGR over the forecast period, such as the ability to control the pressure drop instantaneously between the first and final stages of the spray drying process and to produce dust-free agglomerated products with optimum dispersibility.



Spray Drying Equipment Market: Market Dynamics

Drivers

Increase in the consumption of processed and RTE Foods

Ready-to-eat (RTE) foods, as the name suggests, refer to that form of food products derived from animals or plants, or a combination that can be offered after pre-washed, pre-cooked, processed, and frozen to customers. They do not, therefore, require elaborate processing before consumption by end-consumers; thus, saving their time and energy. Besides, changes in consumers' lifestyles over the last decade have led to high demand for processed and ready-to-eat food products due to rapid urbanization. A sharp rise in levels of dual-income, living standards, and the demand for comfort has also led to an increase in consumers' busy lifestyles. The significant increase in demand for maltodextrin has led to an increase in the use of spray dryers among food additive manufacturers, reflecting positively on the market for spray drying equipment.

Investments in Brownfield and Greenfield Establishments

The global spray drying equipment industry has seen significant investments in brownfield and Greenfield establishments across various verticals. In the niche industry of spray drying equipment on the back of over 900 brownfields and Greenfield food, chemical, and pharmaceutical facilities, both developed and developing economies are gaining immense traction. It is also anticipated that increasing product use in the pharmaceutical and nutraceutical industries in the manufacture of antibiotics, penicillin, enzymes, and whey proteins will drive the market over the forecast period. Nevertheless, technological advances are enabling manufacturers to develop products that are energy-efficient and free from emissions of hazardous gases, opening up significant opportunities for the market to grow.

Restrain

High installation and operational cost

The spray drying of the required equipment and its continuous operations is offered at high costs. The main auxiliary equipment is equally costly, regardless of the type of atomizer and the capacity of the dryer. Due to the large volume of hot air that circulates in the chamber without contacting the particles, spray dryers generally have low thermal efficiency. Additionally, for atomizing, spray dryers that use two-fluid nozzles require compressed gas. The high energy and pressure requirements have already added to the overhead costs without taking into account labor and maintenance costs.

Spray Drying Equipment Market: Regions

Spray Drying Equipment Market is segmented based on regional analysis into five



major regions. These include North America, Latin America, Europe, APAC, and MENA.

Spray Drying Equipment Market in North America held the largest market share of 30.2% in the year 2018 due to the rapid adoption by key businesses of new and emerging technologies to improve overall efficiency and ensure optimum product quality. Moreover, higher R&D capabilities in the U.S. across different industries, such as pharmaceutical and nutraceutical, led to increased adoption of these devices. During the forecast period, the Asia Pacific region is projected to grow at the highest CAGR. The market in this region is mainly driven by the growing demand among consumers for nutritional products such as infant food and milk powder. In the Asia Pacific region, China is estimated to hold the largest market share for spray drying equipment. The nation is also one of the world's major food and drug encapsulation markets; the market here is projected to grow significantly in the coming years.

Competitive Landscape:

The Spray Drying Equipment market, which is highly competitive, consists of several major players such as GEA Group AG (Germany), SPX Flow (US), Shandong Tianli Drying Technology & Equipment (China), European Spraydry Technologies (UK), hold a substantial market share in the Spray Drying Equipment market. Other players analyzed in this report are Buchi Labortechnik AG (Switzerland), and Labplant (UK), Advanced Drying Systems (India), Freund Vector Corporation (US), Dedert Corporation (US), Carrier Vibrating Equipment Inc. (US), and Yamato Scientific America (US), Tetra Pak International SA (Switzerland), G Larsson Starch Technology AB (Sweden), Hemraj Enterprise (India), and Acmefil Engineering Systems Pvt. Ltd. (India) among others.

The market competition has been stepped up by the availability of many players offering Spray Drying Equipment. In May 2018, Dedert Corporation opened a new food-grade spray test facility in Illinois. This would help the company to increase its customer base in the US market.

Spray Drying Equipment Market is further segmented by region into: North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil, and Rest of Latin America Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey, and Rest of Europe APAC Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China,



South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia, and Rest of APAC MENA Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, Israel, GCC, South Africa, and Rest of MENA

Spray Drying Equipment Market: Key Players

Acmefil

Company Overview

Business Strategy

Key Product Offerings

Financial Performance

Key Performance Indicators

Risk Analysis

Recent Development

Regional Presence

SWOT Analysis

Buchi Labortechnik AG

C. E. Rogers

Changzhou Lemar Drying Engineering Co. Ltd.

Dedert Corporation

European Spraydry Technologies LLP

GEA Group AG

New AVM Systech

Shandong Tianli Drying Technology and Equipment

Spray Drying Equipment Market report also contains analysis on:

Spray Drying Equipment Market Segments:

By Product Type: Rotary Atomizer Nozzle Atomizer Fluidized Centrifugal By Stage: Single-Stage Two-Stage Multi-Stage By Flow Type: Co-Current Flow Spray Dryers Counter-Current Flow Spray Dryers Mixed Flow Spray Dryers By Application:

Spray Drying Equipment Market: By Product Type (Rotary Atomizer, Nozzle Atomizer, Fluidized and Centrifugal);...



Food & Dairy Pharmaceuticals & Nutraceuticals Chemical Others Spray Drying Equipment Market Dynamics Spray Drying Equipment Market Size Supply & Demand Current Trends/Issues/Challenges Competition & Companies Involved in the Market Value Chain of the Market

Market Drivers and Restraints



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- 3. C. E. ROGERS
- 4. CHANGZHOU LEMAR DRYING ENGINEERING CO. LTD.
- **5. DEDERT CORPORATION**
- 6. EUROPEAN SPRAYDRY TECHNOLOGIES LLP
- 7. GEA GROUP AG
- 8. NEW AVM SYSTECH
- 9. SHANDONG TIANLI DRYING TECHNOLOGY AND EQUIPMENT

10. SPX FLOW TECHNOLOGY

Consultant Recommendation

**The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.



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